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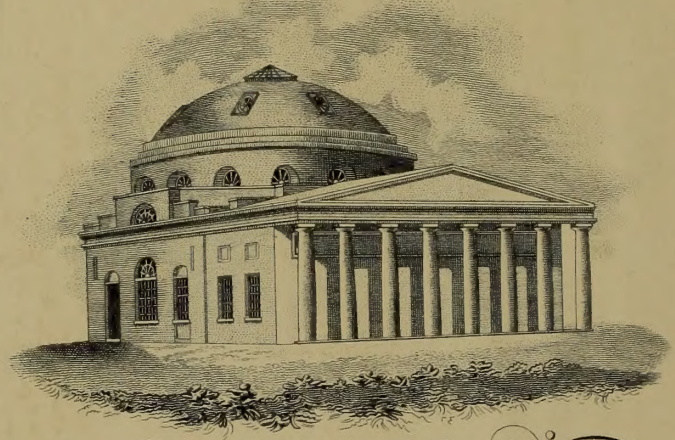

University of Maryland

University of Maryland Theses

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These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

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UNIVERSITY OF MARYLAND

THESES

1883 (d)

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Intermittent Fever

Henry H. Whitaker

March. 1883

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Intermittent Fever.

Definition.- A disorder characterized by febrile paroxysms at stated intervals, and by a stage of fever between the paroxysms, commonly called Chills and Fever. Intermittents have been divided by Modern writers into several types or varieties. The chief types are those founded upon the length of the interval between the paroxysms, viz: Quotidian in which there is a daily paroxysm with an interval of twenty-four hours, Tertian, where a paroxysm occurs every other day, the interval being forty-eight hours, Quartan a paroxysm taking place every third day, the interval being seventy-two hours.

These are the most common types, but we some times meet with Septan, Octan, Double Quotidian and Double tertian. The Quotidian, form is more frequently met with in Children and the tertian in Adults. The paroxysm appears after a longer or shorter interval from the time when the morbid impression was made upon the system. During this formative stage, symptoms of disorder may be more or less manifest, but they are often very slight or hardly discoverable, until shortly before the paroxysm, which may occur suddenly or unexpectedly, with the usual invading symptoms. The

fully developed paroxysm commences with a creeping chilliness along the spine with languor or a sense of fatigue, paleness and a slight collapse of countenance, lividity of the nails, and like those marked in childhood, and a feeling of universal coldness. The temperature of the surface is reduced - the skin is dry and rough, shiverings or tremblings, or rigors occur and the teeth chatter. Sighing, yawning and stretching with difficult or forced respiration, occasionally cough and nausea are present. The patient complains of a constrictive pain in the head and temples -

of aching of the back and loins, and of clamminess and a disagreeable taste in the mouth. The tongue is white, or loaded appetite lost - the urine limbid, sometimes pale - and the bowels are generally constipated. Sickness and (billious) vomiting supervene, the pulse is constricted, small weak, and often accelerated - and the mental powers are weakened or overpowered.

Such is the cold stage.

<u>The Hot Stage</u>:- the transition to this stage may be sudden, but is generally gradual, being indicated by alternate flushing and chilliness, or by parts of the body becoming

room, when it becomes fully developed the skin feels burningly hot and dry is red and tumid and sometimes a patchy rash appears. The face is flushed and the eyes are injected and sparkling. There is intense thirst, with dryness and heat of mouth, total anorexia, a white tongue, and sometimes nausea or vomiting. The heart and great arteries throb, and the pulse is generally strong and full. Respiration is more quiet than in the first stage. Headache is always present, with a sense of throbbing, and sometimes more or less delirium occurs, which may be very violent, or convulsions may set in.

This stage lasts usually from three to eight hours the extremes being from one to eighteen hours. A real increase of heat of the surface is found by the thermometer; sometimes reaching 105° to 108°, while in the cold stage, the sense of coldness does not prove a low temperature of the body; which the thermometer sometimes shows to be very much above normal.

Sweating Stage:- Respiration breaks out over the forehead and breast, increases rapidly, extends over the whole body, and soon becomes profuse. All the symptoms now subside quickly the pulse is slow and soft, the skin cool. The urine now

is passed freely, and deposits a brick-
dust- like sediment. There is no definite
length of time to be assigned to the
sweating stage. In the three stages
now and then one or two may be wanting.
The bowels now being more readily
acted upon and the mind more
composed, a sense of exhaustion
only now remains, and the patient
often falls asleep - and the paroxysm
is at an end. This the sweating stage,
corresponds with the periods of crisis
and decline. The whole duration of
the fit varies from two to sixteen
hours, the common length of it being
about six or seven. The paroxysm
having terminated more or less

completely, in health, some degree of lassitude and debility usually remains, is renewed after an interval, the duration of which constitutes the type of disease.

Of the double types, the tertian is the most common and differs from the quotidian only in having, on alternate days, fits corresponding in severity, character and duration. Agues are most prevalent in the spring and autumn, tertians and quotidians in spring, and in Adults of a bilious temperament quotidians in autumn — in very young persons, in females

and in the lymphatic temperament, Tertians are the mildest and shortest in duration and often sometimes disappear themselves. Quartans are removed with the greatest difficulty, they sometimes continue from autumn till the following spring. The longer the apyrexial interval, the more complete is the restoration to health. but during this period or intermission the patient often complains of pain in the head, of a sense of cold, and weakness, want of appetite &c. When the ague continues some time, although it may not change its

type or form as it is then found to do, especially in the more climates the patient becomes weather, loses flesh, has a sallow look, and experiences obstructions or enlargement of the spleen, liver, mesenteric glands &c, with a abnormal state of the secretions and excretions, The conversion of one type of ague into another often occurs tertians and quartans changing to quotidians, or to double or triple tertians and quartans especially when they become aggravated-and quotidians into tertians when they are somewhat ameliorated. Agues, particular

Quotidians, may also be converted into remittents, or even into the continued type, by the constant operation of the exciting causes, or by other powerful determining influences but they often assume a complicated, or an irregular form in the course of transition.

Aetiology.— Upon the origin of Malarial fevers, the following facts seem to be established. They are always strictly localized in prevalence. An average summer heat of at least 80° for two months is necessary to their development. Their violence and mortality are greatest, in tropical and sub-tropical climates. They prevail least when the

surface of the earth is rocky, and most near marshes shallow lakes and slow streams. The vicinity of the sea is free from them, and is marshes lie near it. Some observations and experiments, tending to show that minute cryptogamic plants of the family of the Palmellae, abound over the surface of marshes, can generate intermittent fever. When transmitted to localities otherwise free from it. Some authorities assert the discovery, in the soil, water and air in malarious localities of a peculiar microscopic fungus, capable of producing intermittent fever in animals by inoculations; to which they give the name Bacillus Malariae. The

general evidence in favor of vegetable decomposition being the remote cause is, that all countries are for the most part free from paludal diseases while the crops are growing, and only unhealthy after the harvest, when large quantities of vegetable matters are left on the ground at the time the rain begins to fall. Marshes are in general healthy till the summer's sun or other causes, has diminished their waters, and bared a greater or less portion of their bed, The part thus exposed almost always contain a large portion of vegetable growth of a fungoid nature which may be or may convey the poison which

gives origin to this class of diseases. The animal poisons on account of its low specific gravity keeps at near the surface of the earth. Therefore persons sleeping in the upper story of a house may be more apt to escape the influence of the poison, than those sleeping on a level with the ground.

Morbid Anatomy.- The spleen presents the most notable changes, being at an early period much enlarged, from congestion, softened, and sometimes purulent. After awhile it becomes permanently hypertrophied and firm constituting the so called ague cake. The liver is also congested and soft,

and ultimately hypertrophied.
The changes in the blood: the white corpuscles are much increased in numbers, but the most important change in the composition of the blood is the formation of pigment from the haemoglobin, the haematin is set free, and is found in all the principal organs associated with the vessel-walls, and rarely collected in masses, and forming capillary embolisms.
Complications and Sequelæ. Persons suffering under the influence of malaria are very liable to pneumonia, which comes on rapidly after

involves both lungs and is of a very dangerous character. This is particularly observed in patients returning from hot malarial climates to cold climates. The blood is also prone to manifest acute changes of a serious character, ending in marked anaemia with excessive formation of white corpuscles, this condition being accompanied with dropsy. Various forms of neuralgia are apt to follow ague.

Diagnosis.- The chill can hardly ever be certainly assumed to be malarial, because very many acute diseases begin with a cold stage.

A case of intermittent cow complete at all points, could hardly be confounded with any other malady. It may be mistaken for pyaemia in which there are chills, fever and sweats, with an apyrelic interval. It may be also mislaken for Hectic fever, which there is usually a known cause for the symptomatic febrile symptoms; the patient is weak, and emaciated, the paroxysm is irregular in time and duration: there is a bright roseate flush upon the cheek, and headache is usually absent. It differs, however from pyaemia in its origin and in the clinical course.

Intermittent is due to a supposed miasm — pyaemia to wounds, suppuration of veins, ect; Intermittent is regular in its course — pyaemia is very irregular, no defined intervals occuring; intermittent is a benign affection, promptly cured by quinia — pyaemia is a fatal disease, over which quinia has no influence. Masked intermittents are differentiated from the local maladies whose form they assume, by the fact that malaria is abundant, that these diseases are distinctly periodical, and that they yield to the remedies for malarial.

The diagnosis of various pernicious forms is very difficult.
Prognosis,- Left to itself, intermittent will sometimes get well as early as the seventh, eighth or ninth paroxysm; more often it will last ten weeks; sometimes for as many or more months. When under treatment, it is almost always possible to break the chills by quininization or cinchonization; but they frequently return; especially at the end of one, two or three weeks. It is a good sign for the paroxysm to occur later and later in the day, and to become shorter and shorter.
Tertian ague is generally the most

readily cured; quartan the most intractable, though comparatively uncommon. Death in modern times, since the discovery of the properties of Peruvian bark, almost never happens from the ordinary type of intermittent; the pernicious form is very rare. Those who have suffered from this disease are liable to future attacks, apart from any exposure to Malarial influences.

Treatment.- During paroxysm in the cold stage the patient should remain in bed, being well covered with blankets, some form of heat being applied externally, and hot drinks administered.

where there is much depression, diffusible stimulants are required, and a little opium may be given to relieve great restlessness, persistent vomiting is best checked by giving an emetic and an effervescent draught or small dose of calomel. In the hot stage the skin should be sponged freely, and cooling effervescent or saline drinks be given. During the sweating stage nothing is necessary but to keep the patient covered, so as to prevent a chill.

During the Intervals.— The great remedy at this time is quinia and it rarely fails to bring about a speedy cure. There is much difference of opinion as to the mode of administration,

... dose of quinia in the treatment of intermittent fever; but experience teaches us that a mercurial or saline cathartic adds to the efficacy of the remedy used. To abort the expected paroxysm quinia should be given immediately after the preceding one in doses from four to five grains every three or four hours, until a sufficient quantity has been given, which is usually about twenty grains. To prevent relapses, quinia must be given at certain periods on the second or third day, and on the fourth and sixth days after the date of the first administration, according to the type. Having in view the tendency to relapse

at subsequent periods quinia should be again given on the twelfth to the fourteenth, and on the nineteenth to the twenty-first days. In the pernicious type quinia should be given in large doses at short intervals; hypodermatically, per enema or by the mouth. Chronic intermittent may maintain a constant tendency to retapse in spite of cinchonisms. In such cases anaemia and the malarial cachexia are usually present. The remedies most successful in such cases, are Arsenic, Iodine, Iron, Mineral acids, ect. The remedies used should be adapted to the severald indications. Lieven Salvia has recently been used as a substitute for quinia. The dose

given is a teaspoonful of the fluid extract in hot lemonade an hour before the expected chill, to be repeated in half an hour if perspiration has not appeared. The advantages claimed for it over quinia are: It acts more promptly, there is less nervous disturbance, it can be taken for a longer time without depression. It is eliminated more quickly and is more palatable, and is not incompatible,

As a prophylactic Quinia in small doses, while exposed to the malarial poison, say from two to five grains every morning, and avoid exposure to night air.

Ague

Definition –

A specific non-contagious fever, produced by malaria; characterized by enlargement of the spleen and recurring attacks of fever attended each with a cold, a hot, and a sweating stage; and having a tendency to recur, which may last for many years.

Causation and history. –

What, it may be asked, is the condition common to all the variously situated regions which causes ague? Is it high temperature? Clearly not: for many of the hottest climates of the earth

are completely blameless. Is it the presence of water? The answer must be no; for, if aqueous vapor could cause ague, all who frequent the sea or live near rivers, should contract ague; and especially aguish districts should be most dangerous at those very times when they are now most free. Is it the presence of decaying vegetable matter? Again the answer must be no. Decaying vegetable matter exists abundantly in places where ague never occurs; if such could cause ague Londoners should be infected by the contents of their

The dust [illegible] and of the [illegible] [illegible] of [illegible] common manure. But the specific influence of decaying vegetables in the causation of [illegible] is disproved by the fact that ague prevails in certain places where no such matter exists. It would seem, therefore, that neither heat, water, nor decomposing organic matter is alone capable of evolving the malarious poison; but that for its production there must be a certain porous character of soil, a certain degree of saturation of this soil with water, the surface having undergone desiccation, and a certain elevation of temperature.

It may be added that nothing is more certain than that aguish districts may be rendered perfectly healthy by drainage. Malarious poison is manufactured in the soils of Malarious districts and to be exhaled from the surface in company with the moisture which rises from it and at nighttime far more abundantly than in the day. It forms over the infective ~~aeria~~ area a kind of invisible mist, which is denser and more potent in proportion to its proximity to the ground and which extends to no great height above it. It is observed that ground floors of houses in aguish districts are more dangerous to sleep in than

are the higher stories; It is also dangerous to drink water however pure it may seem to be, which is furnished by the soil of such localities.

What, then, is this miasm? Is it a gas, is it some decomposing organic substance, is it a living thing?

No direct proof has yet been adduced of the truth of either of these alternatives. There is, however, much both in the behavior of the miasm and in its effects on the human body to indicate a generic relationship with the contagia of infectious fevers, and to render it probable, therefore, that the last of the alternatives above

expressed is entitled to acceptance.

Symptoms and Progress—

It may make its appearance in four and twenty hours after a person has been exposed to it, or he may go for months before it makes its appearance.

Agile presents itself in two distinct forms, which pass one into the other by insensible gradations.

The first of these is the Intermittent fever, which is common in temperate climates and comparatively mild;

The second is the Remittent fever, which occurs chiefly in the tropics, and is of great severity and danger.

We will first describe the phenomena of Intermitent, then, Remittent,

Intermittent fever is characterized by the occurrence of febrile attacks of some hours duration separated from one another by periods of apparently, or at all events comparative good health. The patient is attacked with headache, and general malaise, with a sense of chilliness, and weariness, Muscular pains, and epigastric discomfort. The sensation of chilliness begins on the back extending thence to the rest of the body. The shiver is converted into a rigor, attended with violent chattering of the teeth and convulsive twitchings of trunk and limbs. The skin becomes dry, the tongue

surrad. During this stage the pulse is weak, frequent, and often irregular; the respirations are quick and sighing; there is loss of appetite, thirst, and the urine is pale, abundant and passed frequently. This is termed the cold stage. it varies very much it may last only a few minutes or it may continue for many hours. During this stage the temperature of the patient is above normal and rises rapidly. The temperature may rise to 105 or 106. After the cold stage subsides and the next, the hot stage commences. The patient begins to feel comfortably warm and the skin becomes and livid surface assumes

the smoothness and hue of health. But gradually the sense of heat gets intense; the pulse becomes fuller, stronger, and soft but maintains its frequency; the urine is still abundant but of a darker color and higher specific gravity; mental confusion is not unfrequent and there is often delirium. The hot stage lasts from one hour to five or six, or it may last for twelve hours.

The hot stage is succeeded by the sweating stage. The patient will feel somewhat comfortable, moisture will appear on the face and rapidly involves the whole surface; the temperature rapidly falls the pulse becomes less

frequent and softer; the respirations resume their normal rate; the loss of appetite and thirst disappears; the patient may fall into a sound sleep. The duration of this stage is various but generally shorter than either of the other two. The "intermission" is the time that elapses between the attacks. In one variety the interval is twenty four hours or thereabouts, and there's a daily febrile attack. This is termed the Quotidian ague. Where the interval is forty eight hours more or less, and the paroxysm occurs every other day, it is known as the Tertian ague. Where it occurs every third day it is the "Quartan ague"

In some cases we have what is termed double Tertians or double Quartans. In the double Tertian the febrile paroxysms occur every day. In the doubl quartan, the patient suffers, as it were, from two series of quartan attacks, the first series of similar paroxysms occurring, say on the first, fourth and seventh days; the second series occuring on the second, fifth and eight days.

Remittent Fever—

This form of ague is most common in tropical climates. It is more dangerous than the Intermittent Fever. Its distinguishing feature is that the febrile paroxysms which come

on once or twice a day, are not separated from one another by intermissions of complete apyrexia, but are rather to be regarded as exacerbations of an abiding febrile state. The cold stage is very short and mild, sometimes escaping recognition; the hot stage is much prolonged, lasting from six to twelve hours; the sweating stage is imperfectly developed, and merges into the period of remission from which it is undistinguishable.

Pathology—

The pathology of ague is very obscure; and Morbid anatomy throws but little light upon it. We know

that a poison is taken into the system, and that this remains incorporated with it for an indefinite period, giving rise at irregular intervals to more or less distinctly periodical attacks of well-marked fever, attended with rapid destruction of tissue, high temperature, and congestion of internal organs, but more especially of the spleen. Where the poison lurks, why it acts periodically, and on what organs it acts chiefly are matters concerning which is little yet, not clearly understood. Enlargement and induration of the spleen and liver are among the common results of repeated attacks of ague.

Treatment

The prophylactic treatment should be attended to, by draining and clearing away underwood if such be the cause; all precautions should be taken by not sleeping in the lower rooms, not drinking the water of such localities unless well filtred, should not go out at night, nor very early in the morning. The Medical treatment should be first, to treat the paroxysms and then the disease or rather the cause. During the cold stage we may apply warmth for comfort sake during the hot stage we may apply cold by cold packs or sponging.

Cinchona, and its alkaloids and arsenic are true specifics, Iodine has also been used with great success. The Sulphate of Quinine is the preparation most used. As to the dose in which it should be given is a question among some autors, By some it is thought best to give thirty grains at a dose; some say just before the exparoxysm. others say just after or during the sweating stage, others say give it in alterative doses. Prof R McSherry says give it in five grain doses every two hours commencing twelve hours before the expected paroxysm.

J. M. P. Brown

1858

James G. Hamell

Prolapsus Uteri:

The normal position of the uterus in the pelvic cavity is about two inches from the vulva. When from any cause it descends so as to occupy a position lower than this, it is said to be in a state of prolapse. This abnormal position of the uterus is of frequent occurrence, and is known to the laity under the name of "Falling of the womb". There are three varieties of prolapsus, denominated, first, second and third degree. In the first degree the uterine axis is bent forwards; it is slightly anteverted and sunk

in the pelvis. In the second degree the body of the uterus is turned towards the sacrum, the cervix having descended to the Ostium vaginae. In the third degree, the last resistance is overcome, and the uterus is partly, or entirely extruded from the vagina. The uterus is sustained in its natural position by the surrounding areolar tissue, which binds it to the bladder, rectum and pelvic walls; and the uterine ligaments. These are eight in number.- The utero-vesical, utero-sacral, the broad and round.

The abdominal muscles exercise a considerable degree of retentive power; also the vagina. In all cases of prolapse, the ligaments are enfeebled by increased tension. The causes are predisposing and exciting. The predisposing causes, are child bearing, laborious occupations, advanced age, habitual constipation and strumous diathesis. The exciting causes are numerous, and may be divided into four classes. 1st those increasing uterine as Tumors, hypertrophy, pregnancy or retained fluid. 2nd causes connected with enfeblement of uterine supports, as a

very large pelvis, laceration of perineum, loss of tonicity in ligaments, atony of abdominal muscles &c. 3rd Causes forcing the uterus down. as violent coughing, ascites, light and heavy clothing, straining at stool & 4th causes which drag the uterus down, as shortness of the vagina, prolapse of the bladder, vagina or rectum. There is generally a combination of two or more of the above causes, while one is especially prominent.

Symptoms. These depend upon results of the displacement. Mechanical interference of

the womb with surrounding parts. and alteration induced in its circulation and tissue by reason of its abnormal position. It may be even in the third degree of prolapse without any marked symptoms but there is generally congestion, areolar hyperplasia, and granular degeneration, which render it sensitive and intolerant of pressure. By dragging upon the bladder, rectum and pelvic areolar tissue and fasciae, and protruding between the labia discomfort is produced and locomotion

interfered with to a great extent. The most prominent symptoms are a sensation of dragging and weight in the pelvis, rectal and vesical irritation, pain in back and loins, great fatigue in walking, inability to lift weights, leucorrhoea and other signs of congestion. In prolapsus there is not generally any disorder of menstruation, and sterility does not ordinarily exist. These immunities are probably dependent upon the fact that the uterine catarrh which exist is rather the result of a passive

congestion of the endometrium
than true inflamation,
and the axis although
altered is not bent upon
itself so that an obstruction
is produced.

Physical Signs. All the detailed symptoms
can be elucidated only by
an examination. Should
prolapsus exist in the
first degree, the body
of the uterus will be
slightly anteverted and
the os low down in the pelvis,
pressing upon its floor.
As the finger is passed
upward in front of the
cervix and along the base
of the bladder, the resisting

anterior wall of the uterus can be clearly distinguished. If the second degree have been reached, the os will be found at the ostium vaginae, prevented from escaping by the sphincteric muscles, and the body will be slightly retroverted. Sight and touch combined will make the diagnosis of the third degree easy. The uterus in this degree will be found partly or entirely out of vulva. When the uterus is prociident and a sound introduced it passes up five or six inches. When the organ is replaced and

the sound introduced it only measures three or four inches. Differentiation. Prolapsus may be confounded with fibrous polypus. inversion of the uterus, and hypertrophic elongation of the neck. From these it can be easily distinguished. From polypus it may be known by presence of Os and cervix. From inversion by presence of Os and Shape of the mass. From elongation of the cervix it can be recognized by length of cervix which elongation presents, and the impossibility of replacing the supposed

prolapsed organ, and the great depth of organ discovered by uterine probe.

Prognosis. In the majority of cases a great deal can be effected by medical and minor surgical means. and complete restoration of organ to its normal position. If the displacement is caused by a tumor nothing can be done unless the tumor is removed. In cases where it is due to prolapsed vagina, bladder or rectum cure can be affected by means appropriate to the relief of these abnormal conditions.

Prolapsed of Uterus produces various complications. Such as congestion, endometritis, hyperplasia, hypertrophia elongation of cervix, cystocele and rectocele.

Pathology: Gynecologist are at variance as to this. Whatever the cause may be, it always produces diminution of uterine supports in power. The ligaments are stretched, the vagina distended and doubled upon itself or everted and the contractile power of the sphincteric muscles impaired. The organ is generally affected with inflamation of the mucous membrane

lining its cavity. Solutions of continuity appear upon the cervix. The vaginal rugae are effaced and the lining of canal exposed to atmospheric influences and friction looks like cicatrized surface of scalded skin rather than mucous membrane. Treatment.
The first thing to be done is to return the displaced organ to its normal position. Then we must keep it in position. It is not generally difficult to replace prolapsed uterus, but in some cases it requires intelligent tatis. Often there are difficulties in replacing it. the patient

should have rectum and bladder evacuated and be placed in the genu-pectoral position, in order to gravitate the abdominal viscera towards the diaphragm. She should be on a floor or table. Ten or fifteen minutes should elapse, before attempts are made at reduction, in order that congestion may diminish. Then take the cervix into grasp of the index, middle and ring fingers, push the uterus forcibly upwards in coincidence with the axis of the inferior Strait. While the right hand is thus employed, the left

rest upon the back of the patient to steady her body. No sudden or violent force must be used, but steady pressure kept up for fifteen minutes if necessary. Most cases will yield. In some extreme cases it may be necessary to put the patient under an anaesthetic.

Methods of Sustaining the Uterus. The original cause should be ascertained and treatment directed to the cause as well as effect. If it be due to pressure from above as tight lacing and heavy clothing, the weight should be removed by the use of skirt supporters.

If it be due to Ascites, we should direct our treatment to the underlying cause first, then to the effect. The abdominal supporter is often beneficial where the cause is relaxation of the abdominal muscles. If it be due to increased weight of uterus means should be adopted which will diminish weight of organ. Polypi, tumors &c. should be removed by operation. Inflamation, hypertrophy and congestion should be relieved by appropriate treatment. Laceration of cervix should be united with stitches. If it is due to loss of

Strength of uterine supports.

Our treatment should aim at their restoration. The recumbent posture, local astringents, General tonics, pessaries &c. Pessaries constitute a valuable means of supporting the uterus, but must not be relied on as the means which will effect a cure of itself. In selecting a pessary, choose one which will support the uterus without distending the vagina. Almost any pessary may be used with advantage, especially, Meigs elastic ring pessary, Hodge's, Smith's, Hewitt's or Thomas. A pessary should be examined occasionally to see if it is injuring the tissues.

Perineal sutures are sometimes
of service in supporting the uterus.
Perineorrhaphy. This operation
which consist in sewing up a
lacerated perineum, is of great
service where this body is ruptured
and support to vagina lost.
Should the cause of prolapse
be due to over distended or
prolapsed vagina, great
relief may be obtained
by colporrhaphy which
consist in narrowing the
canal by passing sutures through
its anterior or posterior wall.
Written by James J. Harrell and
submitted to the Faculty of University
of Md. Medical College.

1883

S. E. Shelburn

Diphtheritic Dysentery—

In entering upon the consideration of our subject it will be well to take a general though hasty view of the Classification of bowel lesions, and then develope the peculiar points appertaining to our specific subjection. The manifold varieties may be grouped under four general heads, viz.—

(1). Acute Diarrhoea,

(2). Acute Dysentery,

(3). Chronic Diarrhoea & Dysentery,

(4). Tubercular Diarrhoea.

The crucial diagnostic symptom between the first and second headings, is the absence or presence of Tenesmus. All acute cases in which Tenesmus

exists belong to the heading dysentery. The third section is not determined by lesions, but by duration and secondary lesions, with corresponding symptoms. The fourth class refers to those who are afflicted with the tubercular diathesis. The subject of our thesis falls under the second heading — which we divide into — (A). Inflammatory or Catarrhal Dysentery —

(B). Diphtheritic Dysentery.

We are aware that in making our classification we do not agree with all authorities — but there is such confusion between the so called "Standard", that we

accept that nothing which appears to us to be in accord with reason, and conformable to modern scientific investigation. Acute dysentery is one of the most frequent, painful, and fatal diseases, that has occupied the attention of the profession since the earliest ages. In ordinary times the death roll is largely made up from its ravages — but when the tocsin of war is sounded, and the tramp of moving multitudes resound in the land — then it puts on an aspect of terror, and gathers in its victims by the thousands. Imperfect as are the records of the late war, they show that over a mil

[illegible] cases of the disease occurred among the [illegible] [illegible]; and, when we consider the imperfect preparation for exposure and hardship among the Southern troops, we may readily conclude that the sum total must have been immense. Although described as Dysentery by Hippocrates, the [illegible] of Medical Scrambulge have both limited and modified the use of the term, and this is the reason for the [illegible] [illegible] to [illegible] regarding the complicity of [illegible] authorities — some differing from others in the extention of the term, and others again predicating of the disease, in general, the [illegible]

which affection [illegible]. Without further regarding these differences it is convenient, at present, to direct our attention to those cases of alvine flux, whether mucal or serous, accompanied with Tenesmus, as a prominent symptom.

Tenesmus. The inflammatory process, upon which the flux depends, affects the mucous membrane of the descending colon and rectum — so that the expulsive effort becomes prominent. As mere intensity does not determine between Diarrhea and dysentery, it is equally true that only a slight degree of inflammation, located in the region mentioned, may produce the expulsive

symptoms so many assigned to dys-
enteric, that the same phenomena
of acute intestinal inflam-
mation are exceedingly prone to in-
volve this part of the intestinal
canal and thus determine symptoms
of true dysentery. In our pathog-
nomonic deductions we must not
be considered as advancing the idea
that 'tenesmus is a sign' means
dysentery,— for this symptom may
also be caused by irritation, stone
in the bladder, prostatitis, &c., and
in making a diagnosis these must
always be taken into consideration.
Catarrhal dysentery may in a
large number of instances, result from
irritant medication, especially

if the patient be surrounded by the proper hygienic conditions, & treated - while it is generally treatable - it may pass into the diphtheritic form :- and, in fact, we can not always absolutely diagnose one form of the disease from the other, by any means heretofore used. Possibly, if desired, means might be found of throwing light into the ? , and making a diagnosis by the eye. While the statement "False croup are generally diphtheritic", may not aid us in the treatment, yet it expresses a truth. Such cases have died from secondary chronic diarrhoea, and chronic dysentery.

who really suffered from intestinal
pseudomembrane. When the Catarrhal
form of the disease exists, various
humors may be discharged at stool,
but when shreds of the membrane
appear the diagnosis is generally
evident; nor are we able to be
misled by the fact that pseudo-
membrane may occasionally exist in the
bowels without occasioning marked
irritation or loose passages. Occasion-
ally such obvious cases occur,
that nurses have been known to
remark about patients, that they
were passing portions of their
bowels; we should know the
membrane has formed perfect
tubes, and is separated as such.

A close parallel may be drawn between diseases of the throat and those of the bowels. As we have sore throat, with or without ulceration, so we may have the Catarrhal — or according to the old nomenclature, the rheumatic dysentery, — with or without ulceration, and, as again, the throat may be lined with false membranes so may the bowels likewise. And the general remarks may be made that such gargles as are beneficial for disease of the throat are equally suitable for the bowels when used as injections. The presence of membranous formation on mucous surfaces

was never fully recognized until the beginning of the present century. And while not unknown to others, yet we owe a debt of gratitude to the German authorities Virchow, Niemeyer, and others, for calling the attention of the profession so strongly, to facts that had not received proper attention. Virchow is probably the first who applied the term diphtheritic to intestinal false membrane. The same idea was doubtless intended by John Hunter, when he referred to coagulable lymph, as a common sequel to severe inflammation of the lower part of the

or down to the primitive days of Galen, it is not so certain but that his "three grades" so generally accepted as the true division in the Sixteenth century — may not practically include the fluxionary or catarrhal and the diphtheritic varieties — the latter in two degrees of intensity. Again the truth may be covered up by the adjectives — Benign and Malignant, Sporadic and Epidemic, Sthenic and Asthenic, — applied to dysentery by various authors of past days. As diphtheritic dysentery may be an advanced stage of the catarrhal variety, we proceed to describe the symptoms of the latter disease. —

often, after one or two days' indisposition, the patient is attacked by a general sense of uneasiness, both in the abdomen and the stomache. Sometimes the symptoms resemble dyspepsia. After a few hours severe abdominal griping with frequent desire to go to stool. The first discharges are generally feculent and fluid, but we occasionally meet with cases where the discharges are bloody and mucus and without feculent admixture, from the beginning. In the Catarrhal variety we rarely meet with a chill preceding the other symptoms, while in the diphtheritic form, the chill and the subsequent fever are generally severe.

When diarrhoea becomes established, depending it is with variable rapidity, and the symptoms are as follows:- Paroxysmal abdominal griping, sometimes umbilical, and often following the ascending and descending colon,- pain in the loins and sacrum - Sometimes, intense and followed by an urgent desire to empty the bowels.- Spasm of the expulsive muscles - straining and the discharge of mucus, muco-pus, or sometimes blood. The tormina and tenesmus cause pain in the groins and rectum, and the effort to discharge is not followed by a sense of relief. Between the paroxysms there [illegible]

intervals of hours or even of minutes, and occasionally the pain is almost confined to the rheumatic [illegible]. The [illegible] that now develops in the case causes the patient to exhibit a unmistakable features:- nausea and sometimes vomiting occur, with varying degrees of feverishness. Here we have increased fever, a coated tongue with thirst- the pulse generally rising as high as one hundred, with a slight elevation of bodily temperature.- Generally the patient as in all diseases attended by feverishness, is better in the morning, and grows worse as the day advances. By these exacerbations the patient [illegible]

self,- becomes debilitated, or more exhausted,- while during [illegible] the previous traces of inflammation [illegible], may appear. Such is an outline of the course of the disease.- Should it take a favorable turn the intensity of the symptoms moderate and convalescence ensue, but on the other hand it may become chronic or the diphtheritic membrane may appear: in fact the chronic form may itself become diphtheritic.- Probably most of the pseudomembranous cases are previously catarrhal,- however where the diphtheritic poison is prevailing, cases of this variety of

depending, may occur without prominent prodromic symptoms. In case that the catarrhal assumes the erythematic form, the course outlined will probably last about a week. Then are aggravations. The patient becomes debilitated, - the tongue becomes coated, dry, or red, smooth, and dry, - sometimes fissured, - the thirst and anorexia become extreme, - the abdomen tender, - the Colon distended with gas, - the countenance sallow or yellow from absorbed bile, - the expression anxious, - the eyes sunken or glassy, - the bowels constipated, - the countenance hippocratic, and finally death closes the scene.

in the cavity of the uterus
above mentioned, the starch change.
The fluid, serous, and sanious, and
mixed with blood or pus, they may
contain yellowish or reddish masses
of various sizes, which when
examined by the microscope prove
to be dead portions of the villi-
ferous layer with their vessels,
a reddish serum which often
almost takes the place of the purulent
making an appearance as though
fragments of meat were mingled
in blood & water. Accompanying
the above changes we must note
the change of odor which frequently
becomes of a cadaveric offensiveness
that nothing else resembles.

generally, towards the close, the anus becomes red and inflamed, - prolapsus ani may occur, - and heavy sloughs occasionally form about the nates. The cases of diphtheritic dysentery have no particular duration, but vary from the rapid epidemic form, such as seen in army prisons, to those lasting to the third week after the appearance of the first symptoms - or even longer. While death may occur at any time, it is more apt to happen during the third or fourth week than at any other period, - and its advent may be known by a change of stools to a brown, red, or black watery

horrid stench from the immense amount of mucus and broken down membrane. When the same exhales a putrid odor, that nothing can destroy,- and only those whom duty calls can stand the offensive presence, while with subsultus and hiccough the patient sinks in death. In the Epidemic variety, alluded to above, where the disease is "ab initio," we remarked that the chill and fever were both more violent;- but these cases soon present the typhoid condition; with weak pulse, sordes on the teeth, red tongue, tender abdomen, subsultus tendinum, and delirium, or coma. Occasionally they commence

early in the case, almost like a case of Asiatic cholera, or yellow fever. When convalescence occurs it is generally accompanied with alternating spells of better and worse, and each change is generally to be read in the stools; sometimes months elapse before health is fully restored. An extreme tenderness of the bowels is generally left behind, and any imprudence in diet or exposure to cold or wet is liable to occasion a relapse with its full round. Such is an outline of the disease as commonly seen, yet, as in all diseases, anomalies sometimes occur, and this is more likely when other diseases complicate or

modify its course. In a more extended work than a thesis, it would be well to describe minutely the appearances of the stools which represent the various stages and degrees of intensity of the disease. They may be briefly outlined as follows:- Feculent matter generally characterizes the beginning of an attack, whether that be in the form of diarrhoea or dysentery. Nevertheless, small quantities of feculent matter may afterwards appear,- generally as scybalae,- and their presence or absence seems to be related to the degree of constipation which preceded the attack. Again, when the issue is favourable, such

matter again appears, but under many forms as regards color and consistence, - determined by the nature of the diet, hepatic secretions &c.. Mucus is a glairy jelly-like, albuminous, white or yellowish mass, appearing at the beginning of the disease. Largely consisting of cells shed from the mucous surface, it is generally tenacious or stringy. After a time more of the yellow color appears, showing the formation of pus or muco-pus, and when the passages are discharged in a vessel containing urine, the yellow mixture may be easily mistaken for bile, as, unlike the mucus it is miscible with water.

With the above substances generally appear an increased amount of the white blood corpuscles, should we examine by the microscope. Sometimes jelly-like bodies appear, which have been very aptly compared to frogg eggs:- though this appearance has been observed also in healthy discharges,- and, when tested with iodine, these show their composition is starch. Fat granules and blood also appear,- the latter stringy and streaked, or thoroughly mixted,- the first appearance being generally indicative of disease in the rectum,- the latter higher up, in the colon. Generally speaking we will find the amount

of blood discharges to an extent, unless the patient is of a hemorrhagic constitution from scurvy. The source of the blood may be from the mucous surfaces generally, from vessels, or from inflamed capillaries. Such are the appearances outside of those which now require our attention as appertaining to the presence of diphtheritic complication. In examining a part, that has been affected by pseudomembrane, we are struck by the fact that a granular fibrinous layer has often permeated the mucous and sub-mucous layers of the intestine. The so called "fungus"

growth seems to have a power of penetrating the surface and infiltrating beneath with its mass, afterwards in separating to bring away the original mucous, and even submucous membrane, and as a diseased coating to be removed in a cast, or broken down in threads to come away in stringy masses, or finally to be voided as a morbid and putrid semi-fluid. In the breaking down of the pseudomembrane any part of the intestine whose vitality is destroyed may go with it, and in those intense cases involving the submucous coat, the muscular fibres of the intestine are often

left visible as the bottom of the diphtheritic ulceration; This is the most severe form: otherwise the submucous membrane forms the bottom of the ulceration, or in the mild cases the mucous membrane is left entire, - only the false coat sloughing off. In practice we will generally find the different degrees of sloughing exhibited in different parts of the same affected tract. The sloughs may separate in pieces of almost any size, from that recorded in the Edinburg Medical and Surgical Journal, (vol. 46. p. 102.), where the whole Rectum appeared to hang out for two days, before separating;

down to the size varying from one inch - to one half an inch, or even less in length. Microscopically the pseudomembrane, if superficial, - is composed of granular or indistinctly fibrillated fibrine, with pus or blood corpuscles scattered through it, - or aggregated in layers. When true strongles occur the glands of Lieberkühn and other structural elements of the mucous or submucous membranes may be readily recognized. These appearances are however, mostly confused by the inciplent decomposition, and in advanced cases we may be able to recognize nothing but

a granular decomposing mass of gangrenous tissues. In the latter condition greenish, brownish, or even blackish, fragments of the mucous membrane float in an extremely putrid and slimy fluid. We incidentally referred in the beginning of our thesis, to cases of pseudomembranous of the bowels, even without diarrhoea or dysentery. Such cases, we will remark in passing, are liable to be confounded with the one we are considering - by the inexperienced - however the differential diagnosis is easy. Such cases are generally observed in hysterical

women, or hypochondriacal men, - who have had dyspeptic troubles or other ill health for variable period. Such cases differ from diphtheritic dysentery in continuing for several month. Frequently the complaint is paroxysmal, and preceded by the formation of abdominal tumors, with griping. In females the cases are almost uniformly accompanied by uterine troubles. The term Tubular diarrhoea, for this disease, is a misnomen, as, though rare, we have met with a case accompanied by costiveness, and in which the false membrane only passed when removed by active purgation.

The diagnosis by the microscope is determined by the fact that the so called "tubular diphtheria" the membrane is mainly composed of squamous cells, while granular fibrin constitutes the basis of the diphtheritic membrane of croup. The generally accepted theory of diphtheria claims that the disease is only a mass of fungus growth, but even at the present day, the subject is wrapt in some obscurity and doubt. The trouble in accepting it arises from the fact that the same vegetable forms that have been described as producers of this disease

have been found in Cholera, typhus fever, common diarrhoea - and even healthy stools. Possibly the rod-like bacteria, - the supposed basis of the virus, - while closely allied may really be different forms: - just as is claimed in the recent discoveries of the Bacillus as a cause of tubercle, and an allied form of the same as a cause of leprosy. Possibly the true theory is that these parasitic forms may exist at all times in the bowels, or on the buccal mucous membrane, and only become a factor of disease, when other unhealthy conditions, - favor the

human standpoint, - favour their development in immense numbers. The parasitic theory has the endorsement of several brilliant physiologists, including Virchow, whose name alone would give it respectability. It accords with the apparent splitting off of surface membrane by cell proliferation, as occurs in dysentery, - and agrees with the generally accepted belief of contagion from diphtheritic dejections. We could include in our thesis many accidental complications and accompaniments of dysentery; but as physicians we proceed to the end of all our efforts, -

namely, the Prophylaxis and Treatment. Regarding the prophylaxis of diphtheria a most important point should be carefully regarded. Let the discharges from the patient be always covered under ground, as soon as possible, and let the water, in which the stained garments are washed, be treated likewise. When possible disinfect. Carbolic acid, creosote, sulphate of Iron, or Lime, may always be obtained; and their free use will prevent much disease. Treatment:- Let the patient be at once put to bed, as exercise, except in the convalescent stage, is sure to aggravate the disease. Ventilate the

sick room, keep every thing as clean as possible, and do not over crowd. Regulate and properly adapt the diet. Let the food be the most nutritious and digestible that can be obtained. In past days beef tea was largely prescribed, but, when the indications are present arterial sedatives are much better. In the beginning of fevers, when the stomach is loaded, emetics may be useful — as such:- under all other circumstances are to be regarded as harmful. Opiates and Nervines should be used, whenever indicated, and the emetic, — Ipecacuanha, — in less than emetic dose, — is useful with the former. Should

Laxatives be indicated, Castor Oil and Rhei tincture are about the best. Regarding the use of mercurials, the lamentable abuse of these articles by the old school of practitioners, has caused a reaction and now they are not employed enough. Calomel and Rhubarb is a fine prescription for the early stages of many cases. Remember however and only use mercurials with great care and moderation. The refusal to use mercury, at all, in dysentery, is as absurd as the old, heroic, and murderous treatment by calomel and the lancet. Regarding Pilocarpine, it will take the place of any other diaphoretic agent, and may when justly used, prove beneficial.

Hyoscyamus and Belladonna will sometimes take the place of opium advantageously. Quinine, blisters, nux vomica and strychnia, acetate of lead, bismuth sub-nitrate, lunar caustic, and Kino, need only to be mentioned as oftentimes suitable in dysentery. Of special prescriptions we warmly advise the use of such enemata as the following, - or others of similar type. -

Rx. Hydrastis Canadensis gs.	Rx. Argenti Nitras. gr. xij.
Chlorate of Potassa ʒij	Aquae - f ʒvj
Boiling Water Oj	Inject.
Make an infusion and inject.	

Finally we will sum up for this disease, as well as for all others; Common Sense, in the use of such means as we have at hand, is far better than all possible conveniencies and a deficient Judgement.

and the site vesicated.

Since the hunting of which Lewis he was content to the con-decease. "It shows neither ends or cause"! Innoculation would take place in fissure or abrasion skin, ecthma, eating, or by virus being concealed or retained in the fissure or folds of the skin.

The time usually in incubation from ten days to four weeks, generally about three weeks.

After innoculation the abrasion heals and remains so until the primary chancre shows in the site, which generally comes about the third week.

The shortest time claimed is eight

days. The longest time is seventy five days. Prof. [illegible] says: "The initial lesion first seems to the touch like parchment just under the ulcer." In a short time it feels like a split pea with the flat side down.

This indurated deposit enlarges but retains its original shape and hardness. The size and hardness depends upon the density of the surrounding tissue.

In skin or mucous tissue the induration is slight.

Induration usually precedes ulceration but it may follow it.

Generally when the sore becomes phagedenic, the induration

[illegible] room. Ricord speaking, "a Syphilitic chancre dnce it ulcerate, it may remain an indurated tubercle without ever presenting any erosion, or it may remain a mere non-fissure."

When it is said to ulcerate its edges are slanting with a very shallow basin like pit.

Sometimes the base is red, again it is covered with a white fibrinous deposit, but the edges are never abrupt or undermined as in chancroid. The discharge is thin, scant, sero purulent, sero-sanguinous [illegible]. The discharge is never strictly purulent unless a non specific inflammation exist.

In the less indurated vari-
ety there may be no discharge, the
pain is much less than in the [illegible]
[illegible] and it may be so slight that it
may exist without even being noticed
by the patient. Hence a patient
may have Syphilis without even suspect-
ing that he had had a primary sore,
especially if he has ignored it there-
after. Syphilis unlike chancroid
is not auto inoculable.

The sore is about the size of a split
pea to a nickel, once they are as
large as a quarter or half dollar.

The primary sore never heals
under two weeks, and may last for
months, even after secondary become
obvious. We should [illegible]

in our diagnosis. Hence the whole subsequent life of patient may be one of uncertainty & alarm.

"He observes every pimple, abrasion, pain, or slightest physical phenomena, with alarm lest they be the precursors of loathsome ulceration, necrosis, ulcers, paralysis or any one of the thousand sequellae that are even worse than death".

Chancre is to be diagnosed from Chancroid in the following manner.

Chancroid has no incubation, or a short incubation, from a few hours to ten days. Chancre is much longer, from ten days to six weeks. The first is a local sore, and not constitutional, which

is known to be, to being auto-inoc-
ulable. Syphilis is a constitu-
tional affection and is not auto-inoc-
ulable. "Chancre begins as a
papule and remains an erosion
or ulcerates." Chancroid begins
as a pustule or ulcer and remains
an ulcer." Chancre is gener-
ally unique, chancroid is multiple.
Chancre edges are slanting,
basin shaped pit, with scant, thin
discharge. Chancroid is always
a true ulcer with abrupt or under-
mined edges, with a copious discharge.
Secondary eruptions
come on from three weeks to
four months, very rarely after
four months.

Early treatment delays secondary symptoms. Frequently some fever accompanies the appearance of secondary eruptions.

The eruption must be distinguished from simple acne and chancroidal ecthyma.

When there are much fever the eruption may be mistaken for variola. Secondary manifestations appear when the skin in varying forms.

There may be rose, or copper colored spots slight in color or a decided stain.

The secondary eruptions are said to appear upon the skin in the following forms:

Roseola, papular, pustular, bullous, vesicular and tubercular.

At the same time may be seen the following manifestations upon the mucous membrane: erythematous and ulcerous mucous patches, scaly patches &c.

These are all general eruptions except the pigmentary and scaly syphilides and these occur late in the secondary exhibition.

The roseola and the papular syphilides always appear early.

The bullous and the vesicular generally appear in the cachectic.

We frequently find several kinds of eruption in the same individual. When the disease

Should produce one kind of
eruption in one case and just an-
other form in those of another.
But this is probably to be account-
ed for more in the habits and gen-
eral health of the patient than in
peculiarity of the disease.
Mucous patches generally appear
in from three to eight weeks after
the chancre. They appear in the
fauces, tonsils, nares, anus, rectum,
prepuce, between the toes, under
the breasts, between the thighs,
or anywhere two surfaces touch
each other. Prognosis: If the
Secondary eruption is not confined to
purely erythematous it will probably
be mild. If the eruption

is overcoming tuberculosis, [illegible] on [illegible] it is gone.

The division of Syphilis into primary, secondary and tertiary is arbitrary. To say just where one begins and another ends, in a majority of cases, is impossible.

They frequently coexist or run into each other.

For instance primary chancre may continue for weeks ~~months~~ or even months after secondary lesions appear.

Also secondary lesions may coexist with tertiary.

Tertiary syphilis rarely appears in less than two years after chancre and may be delayed for fifty or

or six years, or may not be de-
veloped! Fournier gives a case
where the individual contracted
chancre at 17 years of age, and had
pronounced syphilitic symptoms.
"He was treated and no more
symptoms appeared till he was 69
years of age, 52 years after chancre,
when he presented a pronounced gum-
my treatment, and two years later
a gummy tumor of the thigh, which
yielded readily to Iodide of Potash."
Had he died when 68 years of
age, we might have said he had
been cured of Syphilis.

There is no febrile movement
accompanying the tertiary period.

The tertiary is a much graver

form than the secondary & involve the viscera, the bones the brain, the nerves, and effects all the vital functions. Billroth says: "The dominant effect of syphilis shows itself in a disposition to the effusion of a low-form of lymph or plastic material in nearly every tissue of the body, reasonably modified to a slight extent by the organ in which it occurs".

In this this stage the tuberculous and gummous deposits are very prominent. They are either circumscribed or diffused, and often result in ulceration and destruction of tissue. The gummy tumors are the size of a nut, or that of

are seen and are frequently found in
pelvis, buttocks and extremities.
The first effect is an irri-
tative swelling or a local inflamma-
tion, the skin turns dark or brown,
sloughs and there an ulcer is
formed which may become ser-
piginous or phagedenic.
In the latter form it may,
which destroys the soft parts and
even causes necrosis of subjacent
bone. These deposits may
cause a great many lesions in
the nervous system, having their
site in the cranial vault, in the
meninges, in the spinal cord,
or in the parenchyma of the
brain itself.

As a result of this syphilitic blood poisoning we have thickening of the important nerve-sheaths, the meninges, softening of the brain &c. which produces paralysis, neuralgias, convulsions, aphasia, hebetude, dementia, melancholy and epilepsy. The brain is more frequently affected than the cord, and a persistent headache lasting for months and even years, is a premonitory symptom of brain lesion, that may result in any of the above sad results.

Syphilis is one of the most subtle and inexorable enemies of life, health and happiness.

It robs man of the noblest physique and most gigantic mind.

rarely from to time.

It seems that after a number of years the virus becomes latent and the [illegible] eruption may be from time to time, and from appar-ently healthy. But in a short time a difficulty of breathing, a cough, a snuffles, [illegible], accompanied with the peculiar eruption which first makes its appearance on the feet, nates or the most unclean parts.

Mucous patches, a condylomata manifest themselves about the anus, mouth, nose &c.

Some times at birth the child is slightly emaciated and has a shrivel-ed and senile aspect.

Some inunctation is quite

ailment, nausea, diarrhea and general cachexia are very distinct and if not treated from the may die of Marasmus or Starvation!

These children are said to have coarse pallid skin, with scars or fissures about the mouth, nose sunk, with prominent malar bones, square overhanging forehead, sunken bridge to nose, chronic catarrh, keratitis and sore throat.

Their teeth are irregular, peg shaped with vertical notches.

Abortions may be prevented by treating the mother with mercury during lactation, it also prevents symptoms in the infant.

[illegible]

constitutional syphilis usually makes its appearance from the first to the third month but it may be delayed one year or even fifteen years.

Treatment: Dr. Lebben-says: "That in 1540 an Italian Surgeon cured Francis 1st of syphilis by the use of mercury, since then mercury has been the most important remedy in the treatment of this disease".

The profession is not agreed as to whether mercury is a specific or not for syphilis

In the days when all venereal sores were called syphilitic mercury was reported to have cured many

cases. but since the pathology of venereal ulcers are better understood and classified as hard and soft chancre, we can be made a much positive diagnosis.

There is no doubt that mercury has permanently cured a great many cases of syphilis. but I think it has failed in a great many other cases, even where it has been used carefully, systematically and for a long time.

Hence I do not think that we are justified in saying that we have a specific in mercury.

Mercury is potent in getting rid of the cond. time whether they are

upon the skin or mucous membrane and it may permanently cure a great many cases. The Bichloride of mercury is the best form for internal use.

Some think it is more efficient when combined as follows:

℞ Bichloride of mercury gr viii
Iodide of Potash ℥ i
Water ℥ viii
M. S. ʒ a day.

Or rub in mercurial ointment ½ to ʒ ij every night. Rub it in axilla then inside of thighs, then soles of the feet, then flexures of joints selecting a new place every night. These parts should be well washed.

Fumigation is a favorite mode of administering mercury with the [illegible]

In the anaemic & cachectic mercury should not be given, but iodide of potash, with such tonics as Dupuytren's [illegible] Iodide of Iron, cod liver oil, with good food and plenty of exercise in open air.

(b) affections of the throat, mouth, tongue and palate, local applications of Borax, chlorate of potash and nitrate of silver are useful.

In the anaemic & cachectic, after their general health has been built up and the symptoms have been abated by the above treatment, mercury should be given for a while for its curative effect.

Gentlemen of the Faculty of Med. Dept. Univ. of Maryland.
I herewith present in accordance with the requirements, my Graduating Thesis which will be found enclosed within.

Very Respectfully
Your Obt. Sert.

Edward Clarence Fraser

[illegible]

Dysentery

This disease is one of the greatest scourges of our country present in every season and almost every locality. It exhibits itself in specific inflammation and ulceration of the mucous lining and other coats of the bowels. The cause of this malady is malaria or a poisonous miasm emanating out, and for the purpose of exciting the morbid condition its malignant forms are excited in a different set of organs but its nature is essentially the same.

It is endemic in all localities where malarial fever exists and in some cases is said to be unit

is not contagious. It spreads rapidly if there is an absence of sanitary measures.
The predisposing causes are strumous diathesis constipation, abdominal weakness general debility.
The exciting causes are, cold chills damp atmosphere malaria heat peculiar articles of food crude indigestible food green fruits and vegetables Carbonaceous food.
These causes do not operate directly on the rectum, but on the liver causing a depression of that gland thus obstructing the return of blood from the lower bowel — The blood so to speak is dammed

back and around where - to the
pain. The seat of dysentery is
the mucous membrane of the
intestinal canal, and its nature
is strictly inflammatory - in the
first then irritative, and latterly
a true inflammatory condition.

Let a patient, living in a
malarial section, be exposed to
cold or damp when the body is
overheated it will immediately
repel the blood from the surface
to the internal viscera which is
intimately connected to the skin
at least by sympathy. The internal
congestion is marked by a con-
want of appetite nausea, paleness

of their brown tongue, bilious vomiting
yellow conjunctiva disturbance
of lungs heart &c. This engorgement
breaks up the equilibrium between
the vascular and nervous systems
and the latter irritated by the action
of a poison is excited in an unequal
degree by the former. Hence the
first symptom of the disease is
often constipation due to the heat
present in incipient inflammation.
The irritative stage is marked by
the beginning of the wandering
terminus but no effusion of fluid
for all the hepatic and intestinal
secretions are arrested. The ~~inflammatory~~
inflammatory stage is marked by

the whole mucous membrane of the entire digestive tract being in a stage of inflammation. The morbidly sensitive secreting vessels pour out vitiated, irritating secretions.
Effusion of blood from the intestinal surface might be expected, to relieve the engorged organs but the whole contents of the bowels and their acrid secretions rather increase the general distress.
The pathology of dysentery gives us a clue to its varied symptoms — an inflammation of the entire mucous tract of the rectum due to congestion of the liver. Irritation & distention soon arouses

the abdominal muscles to frequent violent expulsive efforts. Hence the great tenesmus, uneasiness, pain of a griping character. When ulceration begins, the desire to empty the bowels becomes more frequent and is followed by shorter intervals of ease. The ulcerations in dysentery would undoubtedly be much more numerous and extensive, did not nature make an effort to arrest the activity of the inflammatory process by a diminution in the activity of the secretory functions of the small intestines, which no longer pour out such large quantities of vitiated secretions,

by a propagation of the inflammation to the muscular coat, which, when weakened by normal action, have no power to keep them so obstinately confined. The evacuations are scanty, thin mucus, bloody, mixed with small hard lumps of faeces. The scanty stools produce great distress straining, particularly when the motions are dark colored mixed with blood, purulent matter with shreds of lymph. The inflammatory condition is often propagated to the bladder. As a result we have frequent micturition, high colored scalding urine, great constitutional disturbance & prostration

In treatment the removal of the predisposing and exciting causes under which the disease originated is all important. Pure air cleanliness perfect rest in bed, recumbent position strictly maintained, room well ventilated prompt removal of putrid effluvia from the evacuations are indispensible. The diet should be restricted & indications met as they appear. As little medicine as possible, with good nursing, & proper attendance to diet & hygiene most of the cases will get well

To the Faculty of the
Medical Department
of the
University of Maryland
Baltimore. U. S. A
A Thesis.

The Origin & Evolution of the Human Brain

By

C. Elson

Baltimore - Md.

February 7th 1883

Origin & Evolution of the Human Ovum

Each ovary at birth contains about 30,000 graafian follicles or primordial ova which enclose an ovule.

These sacs are surrounded by a delicate & complex network of capillary blood vessels held by delicate connective attachments with each follicle together.

The outer coat of these sacs, which is formed from the stroma of the ovary, is named the "Tunica Fibrosa"; & it is lined by a closely fitting inner coat, or delicate membrane, named the "Ovisac" or graafian vesicle. Within this ovisac, & closely adherent to its inner wall, is another coat made up of several parallel layers of nucleated cells named the "Tunica Granulosa" which surrounds

a pale serous transparent fluid named the "liquor folliculi". This fluid fills the hollow of the sac, excepting at the upper part where floats the human egg or "ovule", embedded in several layers supplied by the granular coat of the "tunica granulosa".

This human egg or "ovule" is composed of one membrane only which is perfectly globular in shape, or is named the "Vitelline membrane" or "Zona pellucida", which forms the only covering to the yolk or "vitellus". This yolk has no white around it, and within its mass lies the "germinal vesicle" which contains the "germinal-spot".

As the graafian follicles approach maturity they rise to the upper part of the ovary and that one, (or several) which is perfectly ripe

penetrates the outer wall of the ovary (or "tunica albuginea"); but just before the ovule emerges, the graafian follicle & its other coats, ruptures, & the ovule escapes, surrounded by a mass of the "tunica granulosa" which is now called the "proligerous disk". It is quickly seized by the "fimbriae" or fringelike processes of the fallopian tube; & conveyed thro' that tube into the cavity of the uterus.

This germ cell or ovule after its fecundation (which may take place either in the ovary, fallopian tube, or uterus) loses its "germinal spot" & "germinal vesicle," & secretes only its single vitelline membrane which now surrounds the yolk or "vitellus".

The first change which takes place within the vitelline membrane is the division

of the yolk into two halves, then the subdivision of these halves into quarters; the quarters into eighths; the eighths into sixteenths & so on in repeating multiples until the "ova" is loosely filled with small, round, nucleated, transparent cells.

The next changes in the arrangement of these cells within the ova. They pack themselves closely together, layer upon layer, until they have formed a level, smooth, lining wall inside of the ova or "vitelline membrane". Within this wall is a space filled with fluid; the residue of the unutilized yolk. Soon, this newly formed cell wall divides into 2 parallel layers: the outer one being named the "Epiblast" & the inner one the "Hypoblast".

The "Epiblast" develops ultimately into the skin, muscles, bones, nerves, blood vessels, sympathetic nervous system, connective tissue, the urinary & reproductive apparatus, & walls of the alimentary canal.

The "Hypoblast" develops ultimately into the epithelial lining of the alimentary canal with its glandular appendages the liver & pancreas, & the epithelium of the respiratory tract.

Later, a third layer is formed between the above 2 layers, named "Mesoblast". This middle layer divides into 2 layers; the upper one uniting with the epiblast forms the "Somatopleure"; while the lower one unites with the hypoblast forms the "Splanchnopleure"; & the space between these

the last trace becomes the pleuroperitoneal cavity.

Soon, at the top of the epiblast, beneath the vitelline membrane, a broad oval elevated, granular ring appears, which is named the "area germinativa" while its central clear space is named "area pellucida". As this ring is oval in shape it will have both a long & a short diameter or axis, and in the long axis of the "area pellucida" a small trough or furrow appears, named the "primitive trace" - The sides of this furrow or "primitive trace" gradually rise & arch over the trough like they meet & so form a tube which ultimately becomes the spinal column & encloses the spinal cord. The sides of the trough which have thus

seen are named the "Laminae Dorsales" or dorsal plates.

On both sides of the primitive knee at the line of origin of the "laminae dorsales", and at right angles to it, a thickening of the epiblast appears, which gradually spreads downwards in the line of the descending axis of the external epiblast, for a short distance, & then turns inwards to meet in the median line the thickening process from the opposite side. These processes are named "Laminae abdominales". The lower portions of these processes at their approaching edges dip obliquely into the yolk-sac, causing a portion of it to bulge downwards & outside their converging constriction & thus form the "umbilical vesicle" which ultimately disappears, while the

portion of the yolk sac compressed within their cavity becomes the primitive alimentary canal. The thin neck or duct uniting these two newly formed viscera is called the "Vitelline duct".

The evolution so far has completed the elementary basis of the bony skeleton & the viscera, excepting the arms & legs which are developed later.

From all sides of the embryo's body, at the line of constriction of the "Laminae-Abdominales", which pinched off the lower portion of the vitelline membrane containing the yolk, hollow folds of epiblast rise up, while the embryo sinks deeper into them, till these folds meet and unite upon its back, & after absorbing their septa thus form a

double sac around it.

The outer sac is named the "External Amnion", & recedes on all sides from the inner one till it reaches the spherical walls of the investing membrane, when it descends along their sides as if to meet its approaching fellow, which it would do, but for the "umbilical vesicle" & its neck the "vitelline duct", and the concurrently developed "allantois" within the sac.-

The inner sac which closely surrounds the embryo forms the "Internal Amnion" or Amniotic Cavity, & becomes filled with fluid which constitutes the liquor Amnii in which the fœtus floats till its birth.

The Allantois arises from the abdomen at the side of the vitelline duct, but originates at the posterior portion of the alimentary canal

and lies between the folds of the external Amnion by the side of the Vitelline membrane and its duct.

It spreads more rapidly than the external Amnion, which is gradually approaching its converging folds to form another double sac, surrounds it, and meets its fellow convergent parts, which diverged in all directions at the bottom of the globe, over the external Amnion, which it has now entirely surrounded, and unites above the back of the foetus. It has now formed itself into a double sac, united by its neck only to the intestines, which becomes the future umbilical cord of the foetus.

This 'Allantois' is supplied with blood

vessels from the iliac arteries by which the developing foetus is supplied with nourishment like its teeth.

This double sac named the "Allantois" fuses with the membrane and then combines with the contiguous surfaces of the external "Amnion" which now lies within its embrace, and the outermost envelope, the Vitelline membrane on its outside. These 3 membranes namely the "Amnion", "Allantois" and "Vitelline" membranes unite into one membrane and are called the "Chorion". ~~which ultimately becomes the true skin~~

This "Chorion", formed from the three above membranes, becomes covered over with external projections or villi, each of which encloses a capillary blood vessel

derived from the "Allantois". –
These villi, covered with epithelium cells, grow longer and send out from their extremities finger like branches, and when fully developed and distributed over the whole surface form the "shaggy coat".

After the eighth week of fatal life, all these villi, excepting one third of them, disappear, and this surface from which they have withdrawn is named "bald".

On the part of the "Chorion" at which the placenta will be formed the shaggy coat becomes greatly increased in density and length. –

The ovum, on its entrance into the uterus, rests between two of the folds

formed from the "decidua vera" which is the excessively thickened mucous membrane of the uterus, and which becomes convoluted throughout the whole cavity, excepting at the orifices of the fallopian tubes and the os-internum, by the stimulating & congesting influence of conception.

These folds of mucous membrane surround the ovum, and unite above it so as to enclose it in a bag; & the top or opening of this bag, is named the "Decidua Reflexa", & the bottom and sides of it the "Decidua Serotina".

This bag becomes very vascular and thickened, and the villi of the "Chorion"

penetrate its follicles like roots, and so form at the bottom of it the "placenta".

The foetus is now surrounded by three membranes; - first, from the inside the "Amnion", then the "Chorion" & next & last the "Decidua Reflexa", and these membranes constitute the "Bag of Waters". -

The attachment of the "Placenta" is formed thus; - the villi of the "Chorion" contain within them loops of blood-vessels, and these villi thus supplied thrust themselves into the follicles of the "Decidua Serotina" which are surrounded by bloodvessels from the uterus. -

At first the coats of the villi and the mucous coat of the "Decidua Serotina"

form septa between their blood-vessels, but soon these septa become absorbed and the blood-vessels of the Chorial villi and those of the "Decidua vera" come closely in contact with each other and unite, grow very thin, but still retain their respective walls, so that the foetal and maternal bloods never mingle.

The blood sent to the villi by the foetal arteries returns by the foetal veins, and so with the maternal blood. The blood vessels of mother and child interlace with each other and thus form the villous part of the placenta, which is formed at about the seventh or eighth week of gestation, and at

full term it is a saucer shaped spongy mass about eight inches in width, one inch in its central depth which gradually decreases towards its edges to one quarter of an inch in thickness. It weighs from sixteen to twenty ounces at birth. It arises from the umbilicus or navel and is the root of the "Allantois" which as before stated unites with the external Amnion and the Vitellina - membrane to form the "Chorion". It is the only organ between the foetus and the mother by which Respiration, Nutrition and Excretion are performed.

The Umbilical cord or "funis" which unites the placenta to the foetus

appears at about the fifth month of pregnancy, and consists of two arteries which are continuation of the hypogastric arteries, and a single vein with no valve, enclosed or imbedded in a gelatinous mass named the "gelatin of Wharton", which is deposited in the cells of the connective tissue of the cord. There are at first two umbilical veins, but one of these becomes obliterated, so leaving the two umbilical arteries and vein, and the duct of the umbilical vesicle. The formation and structure of the cord are thus furnished by the "Allantois". The umbilical arteries which at first were straight become tortuous, and twist around the vein. The cord

is covered externally by a layer of the "Chorion" and "Amnion".

The nourishment of the Embryo is at first derived from the Vitellus or yolk, but as that becomes absorbed, it is supplied by the umbilical vesicle, and then the Chorial villi replace the vessels and absorb nutrition from the vessels of the "Allantois" till lastly the placenta is the only medium for nutritive conveyance which passes apart to the foetus like its birth.

The foetal circulation may be thus described:-

The Placenta receives the venous blood from the foetus and returns

it reoxygenated and charged with nutritive material.

Nearly the whole of the blood of the umbilical vein traverses the liver before entering the inferior vena-cava.

The right auricle of the heart is the point of meeting of the double current; the blood in the inferior vena cava being guided by the Eustachian valve into the left auricle, whilst that in the superior vena cava descends into the right ventricle.

The blood carried from the placenta to the foetus by the umbilical vein, mixed with the blood from the inferior vena cava, passes through

directly to the neck of the foetus, and is distributed by the branches of that vessel to the head & upper extremities; hence the large size & perfect development of those parts at birth.

The blood contained in the descending aorta, chiefly derived from that which has already circulated through the head and limbs, together with a small quantity from the left ventricle, is distributed to the lower extremities; hence the small size and imperfect development of these parts at birth.

The Nervous system of the embryo is developed thus:-

The cerebro-spinal axis is formed

within the medullary canal by the development of cells from its inner surface, which entirely encircle & fill up the canal, and thus remains only the central canal of the cord.

The external surface gives rise to the dura-mater & pia-mater.

The neural canal thus formed is a tubular membrane; it terminates behind in an oval dilatation, and in front in a bilobed extremity, which soon becomes partially contracted and forms the anterior, middle & posterior cerebral vesicles, from which are ultimately developed the "cerebrum," the "corpora quadrigemina" & "medulla oblongata," respectively.

The Anterior vesicle soon subdivides

into two secondary vesicles, the larger frontal becomes the hemispheres, the smaller, the optic thalami; - the posterior vesicle also divides into two; - the anterior becoming the cerebellum, the posterior the "pons varolii" and the medulla oblongata."

About the seventh week the straight chain of cerebral vesicles becomes curved, from behind forward & forms three prominent angles. As development advances, the relative size of the encephalic masses changes. The cerebrum developing more rapidly than the posterior portion of the brain, soon grows backward and arches over the "optic thalami" and the "tubercula

quadrigemina"; the cerebellum overlaps the medulla oblongata.

The surface of the cerebral hemispheres is at first smooth, but at about the fourth month begins to be marked by the future fissures & convolutions.

Charles Coleman Benson
Baltimore. Maryland.
U. S. A.

Feby 7th 1883.

Thesis,

for the degree of Doctor of Medicine.

respectfully submitted

to

the Dean and Faculty of Medicine

of

University of Maryland,

by

George B. M. Free.

1883.

Whiskey.

Whiskey or Spiritus Frumenti of the Pharmacopoeia is the spirituous liquor obtained by distillation. It consists of fifty-six per cent of absolute alcohol in water, together with various volatile principles and ethers which impart to it its peculiar physical properties.

Whiskey differs from brandy, which is also a solution of from eight to fifty-six per cent. of alcohol in water, by the absence of the wine-like odor and the hot astringent taste which characterize the latter. The species of grains most highly esteemed in this country for the distillation of whiskey are rye, bar-

ley, and corn although it may also be obtained from wheat, buckwheat, oats and potatoes as well as from all other vegetables substances which consist mainly of starch, each variety having some peculiar or distinguishing characteristic. It is deemed preferable to use a mixture of several sorts of grain instead of a single one, e.g. rye with corn and a small amount of barley malt is one of the most frequent combinations. That obtained from rye, together with a small quantity of malt, on account of its comparatively mild taste and odor, is considered the best for medicinal purposes. The product of spirit which these different grains

afford depends upon the proportion of starch which they contain.

The production of whiskey which depends on the simple fact that when any vinous fluid is boiled, the alcohol being very volatile evaporates first and may thereby be separated from the watery vegetable infusion in which it took its birth.

The juices of sweet fruits contain a glutinous ingredient which acts as a ferment in causing their spontaneous change into a vinous condition; but the infusion of seeds as corn, rye, barley, etc., even in their germinated or malted state, requires the addition of a glutinous substance

called yeast to excite the heat fermentation.

The first step in the process of distillation consists of the mashing. The grain after being ground and to which is added about one third its quantity of malted meal is poured into the mash tub. Then a sufficient quantity of water heated to about 150° F. is added to the ground grain and carefully incorporated, formerly by manual labor but now, especially in the larger distilleries, by mechanical contrivances. This agitation must be continued for two or three hours, with the addition from time to time of additional water at a temperature of

[illegible] in order to counteract the cooling of material. Before removing it into the fermenting tubs the yeast is added and the whole mass cooled by a cold water and cold air. Then it is run into the fermenting tubs where it is left to ferment for a period of at least forty-eight hours.

The malt from the diastase contained in it exercises a most remarkable influence upon the starch transforming it into dextrin and starch sugar, so that in the course of a short time, the flour, from being thick and sugarless, becomes comparatively thin and sweet. If the wort, as it is called, be examined every half-hour of

the mashing period, it will be found to become progressively sweeter to the taste owing to this production of sugar.

After remaining in the fermenting tanks about forty-eight hours it is pumped into the still where the distillation proper takes place. Here it is heated by means of steam and, as the alcohol is more volatile than the other ingredients contained, it is first driven off. Condensation of this vapor is effected by surrounding the tube containing it with cold water. This tube, or condensing worm, as it is commonly called, consists of a metal pipe, usually copper, twisted into a spiral

water, fusel oil, and various other principles begin to evaporate giving to the whiskey a "wild" taste and odor. When the hydrometer indicates less than 20° above proof the whiskey should be turned off and the remaining portion carried over for the next distillation. The fusel oil mentioned above is an impurity existing in the whiskey in consequence of the cupidity of distillers in carrying on the process after all the alcohol has been distilled over. This oil exists in a considerable quantity in whiskey obtained from the sugar of potato-starch. Not only does it occur naturally in all whiskey but it is one of the many ingredients which is

used to adulterate it.

Physiological Actions.— The physiological effects, as well as the therapeutical uses, of whiskey depend mainly upon the alcohol which it contains. The odor of the breath after its administration depends however not upon the alcohol but upon the presence of various ethers, fuselroil, etc, which the whiskey contains.

Whiskey on being taken into the stomach causes a sense of warmth which diffuses over the abdomen, and if in considerable quantities especially in persons not habituated to its use, is quickly followed by warmth of entire body. This warmth is mainly only apparent as only a slight general rise of temperature

is observed. If a large dose be taken, the action of the heart and the cutaneous circulation increases and the phenomena of exhilaration, of excitement, and of intoxication ensue. A still larger quantity causes a loss of muscular power, impaired coordination of voluntary movements, and a rambling incoherence. The amounts necessary to produce these effects will depend mainly upon the per cent. of alcohol the whiskey contains and also upon the person whether he be one accustomed to its use or not. Habit, as in the case with a great many drugs, modifies in a remarkable manner the physiological activity of whiskey hence re-

ents that will be observed in simple stain-
es will not be noticed in autopsies.

Whisky induces a superficial con-
gestion of the mucous membrane and
as gastric secretion is partially depend-
ent on vascular dilatation this increas-
ed blood supply enables the mucous fol-
licles and the gastric glands to pro-
duce a more abundant secretion. When
however, the excitation of these glands
is habitual important changes take
place under its influence so that in-
stead of producing the normal secre-
tion, they pour out a pathological
one.

The gastric glands at first simply
in producing an increased amount of

gastric juice as is shown by the increas-
ed digestive power after small doses have
been taken; but its repeated adminis-
tration, causing abnormal stimulation,
results in hypertrophy of the mucous
follicles forming the so called nipple-
like protuberances, and in pathological
changes in its secretion giving rise to
the gastric catarrh of the habitual con-
sumer.

Owing to its great diffusibility, on
being taken into the cavity of the stom-
ach, it passes by osmosis directly in-
to the capillaries and so into the gas-
tric veins, consequently not reaching
the small intestines. After leaving the
stomach the blood containing the alco-

-ing passes through the portal vein into the liver. As it renders the portal blood more highly stimulating it increases the functional activity of the liver cells and, as is the case in the stomach, a more abundant glandular secretion follows. Frequent stimulation and congestion of the organ causes an impairment of its proper function, as is the universal law. The connective tissue of the organ gradually increases and the hepatic cells over stimulated are subsequently affected with fatty and atrophic changes and shrink in size, thus producing an obstruction to the flow circulation through the portal capillaries and to

the passage of the bile through the bile ducts, and giving rise to all the results of portal congestion. On the kidney it exerts a similar injurious influence and is the most frequent cause of Bright's disease.

On the heart in small stimulating doses it acts by increasing the force of its muscles. When in large narcotic doses the alcoholized blood produces a lowered power of the vaso-motor nerves and as a consequence a dilitation of the bloodvessels and, owing to the lessened resistance in the movement of the blood an undue rapidity of the heart results. In profound alcoholic narcotism, the pulse is slow

[illegible] ed by the fact that the exciting cau-
ses are being removed.

On the nervous system, whiskey acts, by first increasing the functional activity of the brain; the ideas flow more rapidly, the senses are more acute, the muscular movements more active, and the activity of the functions of the organism in general is increased. As its action on the brain increases, we have incoherence and muddling of ideas, and incoordinate and uncontrolled muscular movements. Delirium tremens is a morbid state of the nervous system resulting from the abuse of alcoholic liquors. Whether this is due to the sudden withdrawal of the whiskey

ey, or whether it is a direct consequence of its long-continued action on the brain, is a mooted question. Perhaps both are correct although the latter must be by far the most frequent cause. Prof. Ohm says he has never seen a case due to the sudden withdrawal of the whiskey but finds that it always comes on in the midst of a debauch. Idiosyncrasy of the nervous system no doubt is an important factor in the causation of this disease, yet certainly one of no less importance, perhaps more is the quality of whiskey which the person is in the habit of drinking and was drinking up to the time of the attack.

The long continued use of whiskey

produces on the nervous system other disorders besides delirium tremens. Anaerosis, epilepsy, paralysis, etc. often results from its excessive use and mental disease, as the asylum statistics prove, has in the same agent an influential cause.

Remembering the fact that the administration of alcoholic stimulants may often bring life to those on the verge of death and that in many other states it is equally useful yet so great are the evil results of its use and abuse that Prof. Chew believes that it would have been far better for mankind had the art of distillation long since been irretrievably lost.

within the organism by far the greater part of the ingested whiskey is disposed of in the process of tissue change and yields up force which is applied as nervous muscular, secretive, and nutritive force. When in excess of this equalizing power of the organism it is eliminated by the various excretory organs as the lungs skin, kidneys etc. It has also been found in the ventricles of the brain, having undergone no chemical change.

Whiskey is a useful food in the small quantity in which it increases but does not impair digestion and which quickens the circulation and the secretions without overstimulation and is a food upon which the organism may rest.

exist exclusively for a certain part of

The physiological effects of whiskey differ in different conditions of system. In convalescence from acute disease, in the sudden depression caused by the bites of venomous reptiles or from injury and loss of blood, quantities which in health would produce profound narcotism, may be taken with impunity.

Therapeutical Uses.—Whiskey itself has little or no curative power, its use in medicine being either as a stimulant to sustain the vital powers until other remedies shall have aided in a cure or until the disease has run its course as in the self limited diseases, and as a food. It is given to counteract the in-

fluence of such depressing agents as aconite, digitalis, veratrum viride &c. and is called for in cases of extreme and sudden depression as after crushing injuries, in very severe burns, and in threatening syncope. It is the principle agent given to persons bitten by venemous snakes. Its action here is not as an antidote or as antagonistic to the poison but as a stimulant to the heart's action, and, on account of the counteracting impression of the poison upon the system, large amounts may be given without intoxication ensuing.

As a food it is constantly prescribed in low fevers, acute inflammations, and all diseases in which there is a rapid

tissue change. It is useful in these conditions when oxidation is going on excessively not because of any special antiphlogistic power which it does not possess, but because it yields up carbon and hydrogen as fuel for the combustion which takes place under the depression of life force.

Owing to the great prostration attendant upon the malignant forms of certain diseases as variola, scarlet-fever, diphtheria, &c its use is absolutely necessary early in the attack.

Whiskey as it tends to retard tissue metamorphosis and to increase the digestive power and favors the deposition of fat, is indicated in the treat-

ment of chronic debility. If it disagrees, i.e. if it lessens the appetite it will be shown. In phthisis it may be given with cod liver oil or, as is frequently done, with some bitter in one or two tablespoonful doses after each meal.

Whiskey is sometimes given hypodermically when (for example, from exhausting hemorrhage) life is endangered by prostration not reached by stimulants administered by the mouth or rectum. It is also given hypodermically before great operations to lessen shock and the danger of hemorrhage.

In prescribing whiskey or any other alcoholic liquor in chronic diseases the physician should never lose sight

of the first [illegible] a craving for stimulants irritation is often easily induced. Dyspeptic disorders, mental depression, or a sense of prostration incident to various diseases and sometimes a constitutional idiosyncrasy, may form an important factor in its producing such a habit. The original dose as the system becomes habituated to its use becomes too small and it must necessarily be increased; this habit the temptation to which is doubled by the relief it affords in such diseases as chronic neuralgia and in melancholia will almost of necessity grow into drunkenness. In the latter stages of consumption, however, its

judicious use as an antipyretic narcotic stimulant to lessen the suffering of the patient is perfectly justifiable.

In conclusion I must again reiterate that one great care of the physician in cases requiring the use of stimulants for any considerable length of time, should be to avoid creating in the patient a craving for their habitual use — a habit far worse in its results than the disease or even death itself.

Thesis.
Diphtheria
by
J. F. Hebrank Pa.

Class of 1883.

Diphtheria.

Definition: An acute systemic disease, affecting the mucous membrane of the air passages generally, although it may appear wherever mucous surfaces exist or any part denuded of skin.

It is a disease of antiquity, dating back as far as the commencement of the Christian era.

Nature of diphtheria: It resembles scarlet fever in certain particulars; in its incubatin period, in its variability of type from a very mild to a malignant form. in the common seat of its inflammation, Namely, upon the fauces and nasal

passages, in the frequent blood poisoning with prostration in the grave cases and in the frequent occurrence of nephritis as a complication. It resembles both scarlet fever and smallpox in the fact that it is communicable both through the atmosphere and by contact. It resembles erysipelas in the variableness of its duration and in the fact that one attack does not protect from another. In its etiology it resembles typhoid fever, for it is not only communicable from person to person but it is produced by foul exhalations, as sewer gas, but while there are certain resemblances, it is distinguished from

all these infectious diseases by marked peculiarities (Smith).

The microscope in the hands of various scientists, has revealed that in all tissues that are the seat of diphtheritic inflammation and in the pseudo-membranes, the presence of spherical bacteria in immense numbers, with a smaller number of other kind, the latter being seen in proportion to the membrane.

It attacks indiscriminately rich and poor, the well fed and poorly nourished, without regard to locality, except that a porous soil, with an underdrainage of clay, appears to favor its development. Bad hygienic conditions

of necessity provoke its existence by
causing irritability

Pathology. Early in the disease there
can be observed redness of some portion
of the mucous surface. In most
cases it is the fauciel mucous membrane
that is affected, generally on the
tonsils, but if there be a pre existing
inflammation of any other mucous sur-
face, a portion of which bounded by
its epidermis and inflamed, the spe
cific inflammation is apt to appear
upon such parts, with or without its
simultaneous appearance upon the fau-
cial mucous membrane.
The inflamed surface is sometimes a

deep bright red color, almost like arterial blood, in others it is a dusky red, which resembles a venous state of the blood, the latter being more common in secondary than in primary diphtheria.

Death may occur within a few hours from the time the inflammation begins a small slightly raised patch is observed. This patch termed the pseudo-membrane, gradually becomes firmer, thicker and broader from fresh exudation underneath, its color being grayish, grayish white. It is usually about an eighth of an inch thick, though it is sometimes much thicker.

By the aid of the microscope may be

seen numerous micrococci and bacteria, which may be traced through the sub-epithelial tissue.

When fully developed the pseudo-membranous exudation has the ordinary appearance of a fibro-plastic membrane. The membrane may consist of several layers, and appear imbricated. At this period the attachments are very strong, so that if the membrane or portions of it be detached slight hemorrhage will ensue, or numerous minute bloody points will be seen upon the sub-jacent mucous membrane. When the inflammation is at its height, it is astonishing to see how rapidly the

pseudo membrane will be reformed, frequently when removed by force.

The consistence of the deposit varies a good deal, some being firm, tenacious and elastic, others being less firm or even pultaceous.

The subjacent mucous membrane is much congested and swollen, with an excoriated and roughened surface, its epithelium being removed, and sometimes presents spots of ecchymosis, although these may be the most usual conditions of the mucous membrane, it is certain that in some cases there is ulceration and thus ulceration and even gangrene occurs. In mild cases of diphtheria

in which the pseudo-membrane is small and superficial, penetrating but little the mucous membrane in which it is imbedded, there is little danger of septic poisoning, but in those cases in which the membrane is extensive and deeply imbedded in the mucous membrane, so that the the lymphatics and blood vessels are in immediate relation with its under surface the danger is great. As soon as decomposition begins absorption of the poisonous substances produces inflammation of the lymphatic vessels along which it passes, and lymphatic ~~vessels~~ glands which these vessels enter. The adenitis also

gives rise to inflammation of the periglandular connective tissue, so that the neck is thickened, hard and tender.

If a gland be examined which is swollen and inflamed by the toxic absorption, we will find that its bloodvessels are congested, and that its cells have undergone hyperplasia.

Bronchitis occurs in some cases, some of which the inflammation is pseudo membranous, especially in the larger tubes while in others it is catarrhal.

The muscular fibres of the heart in diphtheria are liable to granulo fatty degeneration, so that they

become softer. This degeneration is observed only in certain portions of the more malignant cases and is far from being universal.

The kidneys are the most frequently affected of all the internal organs, as is shown by the common occurrence of albuminuria, hæmorrhagic nephritis, with the characteristic hyperæmia and swelling, is the usual form of kidney disease which complicates diphtheria.

In the albuminous urine are found hyaline and granular casts.

This complication may begin as early as the first or second day, but

ordinarily it does not commence until the close of first week, or in the beginning of second week.
Interstitial nephritis also complicates certain cases.

Symptoms

The prominent symptoms are not always proportionate to the gravity of the attack.
The initial symptoms are chilliness or rigors, often slight, succeeded by febrile reaction, languor, headache, more or less severe, pain in the limbs or back, and impaired appetite. The symptoms of invasion have less prognostic value in

diphtheria than in most other infectious diseases, there being cases, which are attended in the beginning by delirium &c, which terminate in recovery within a week. On the other hand, a mild commencement sometimes ushers in a fatal form of the disease.

The fever which ushers in diphtheria abates after the second or third day, after which time there may be but little or no elevation of temperature;

The tongue is usually moist and slightly furred.

The patient often vomits in the commencement, which is not a grave

sign, if it be not very frequent.

Repugnance to food characterizes most of the severest cases.

The stools usually appear normal except as they are changed by medicines.

The onset frequently is very insidious, so that our attention may not be called to the throat by any complaint of the patient, even when a considerable amount of exudation is already present.

If the throat be examined on the first day of the disease, the exudation may often be found even at that time, though often not found until the second day.

The fauces generally present slight
redness and redness first to the
appearance of the false membrane,
which almost always shows itself
first on one of the tonsils only, in
the form of white spots. The in-
flamed mucus, which runs together
and extend over the whole gland,
and then to the soft palate and
fauces, though it sometimes re-
mains limited to the Tonsils and
soft palate. After a while the
membrane becomes firmer in con-
sistence, thicker and changes from
white to yellowish white or grayish
color. The breath now becomes very
offensive and there is but little sal-

ination.

If the case is a favorable one, and the disease is left to pursue its own course, the pseudo-membrane becomes thinner, assumes a grayish tint, and falls off about the sixth or seventh day. But if the case is a more violent one, the pseudo-membrane about the time it begins to be detached, assumes a greyish or blackish color, and hangs in shreds from the surface to which it had been attached. The fauces presenting a gangrenous aspect, the mucous membrane looks as though it were falling off in shreds; the breath is

very fluid an abundant secretion.

The submaxillary glands are almost always enlarged and painful to the touch, also the surrounding cellular tissue shares in the inflammation, so that the swelling often becomes very great, impeding the movement of the jaw, it being nearly as hard and painful as the corresponding swelling in parotitis.

The respiratory apparatus is not involved in the benign cases in which only the fauces are inflamed but not to the fauces, the Schneiderian membrane is most fre-

generally affected of all the surfaces and when the nares are inflamed and covered to a greater or less extent by the pseudo membrane there is more or less discharge, which may excoriate the upper lip and cause incrustation around the entrance of the nostrils, making respiration through the nose difficult.

Deglutition is generally painful and difficult, at times, attempts at swallowing fluids is by coughing and return of fluids through the nostrils.

Violent coughing, following attempts at swallowing usually indicates that the epiglottis is in-

flamed and is the seat of pseudo-membranous exudation, which interferes with its movements and thus allows the fluid to pass into the larynx.

If the urine be examined, at the close of the first week or in the second week, albumen will be found in a large number of severe cases. The albuminuria, unlike that of scarlet fever, seldom occurs except in the most grave cases.

In most cases of albuminuria, casts, usually granular, but sometimes hyaline are observed. In cases of albuminuria which recover, there is

are comparatively few casts or none while in those in which the albumen is abundant and casts plentiful the termination is usually fatal. The urine, ordinarily, has nearly the natural appearance, instead of the hazy or smoky appearance so common in the albuminous urine of scarlet fever.

Heart clots may form and give rise to alarming or fatal symptoms.

Paralysis which usually begins during convalescence in the second or third week after the abatement of inflammatory symptoms, may begin as early as the

the second or third day from the beginning.

The muscles most frequently affected by the paralysis, are those of the pharynx and upper part of the larynx, but all muscles, both voluntary and involuntary are liable to be paralyzed. The great majority of those affected with paralysis recover in the course of a month or two.

Incubation: It is with great difficulty that the period of incubation can be fixed, although, it is generally given, as being about

three or four days. J. Lewis Smith finds it at any time between two and eight days, with exceptional cases outside of these limits.

Causes. It is both a contagious and infectious disease, may occur primarily or secondarily.

Temperature has but little effect, the moist, cold weather preceding the winter appears to be most favorable to its occurrence.

Diathesis appears to make but little or no difference.

Age unquestionably exerts a very strong predisposing influence, as a large majority of all recorded

cases occurred between the ages of one and eight years. The child at its mother's breast rarely suffers from an attack of diphtheria Hirigs & Pepper say: "Of the 1304 cases in our table, 190 occurred under the age of one year; 335 occurred between one and two years; 725 between two and five years and 35-5 between five and ten years, although the liability thus diminishes in an uncertain ratio with advancing years, no age is entirely exempt from it". However, it may be said that diphtheria is pre-eminently a disease of childhood.

Diagnosis.

In most cases the diagnosis is readily made when the disease has continued for some hours, for then the characteristic pseudo-membranous deposit, which is pathognomonic, is observed upon the fauces.

It may be rendered difficult to diagnose by a disease called Faucial Erysipelas, since both are very severe but Faucial erysipelas is unlike diphtheria, in that in the former we have no dysphagia, no enlargement of cervical glands, no false membrane and its infrequency.

It is distinguished from Scarlet

fever by absence of eruption, absence of "strawberry tongue" and desquamation of cuticle. The exudation may repeat itself in diphtheria but in scarlet fever it only occurs during the stage of invasion Often the diagnosis is made clear by the history of the patient, he having been exposed to the contagious and infectious influence of diphtheria.

Prognosis.

The prognosis is usually grave, especially under the age of three years. The uncertainty of prognosis is largely due to the fact

that diphtheria terminates fatally in several distinct ways. Namely, diphtheritic blood-poisoning, probably from septic blood-poisoning produced by absorption from under surface of decomposing pseudo-membrane. Obstruction of the larynx. Sudden failure of heart's action, or suddenly developed passive congestion of the lungs.

Repugnance to food, very obstinate vomiting, pallid countenance, weakness and emaciation from blood poisoning, a large amount of albumen and casts in the urine are all symptoms that point to a fatal termination.

Treatment.

The first, and one of the most essential things to be done in the way of treatment, is to isolate the patient, and should be insisted upon.

As to the remedies (medicines) to be employed there is a great difference of opinion among practitioners, one thing, however, is certain, that is, that there is no known specific for diphtheria, in the sense in which quinia is a specific for malarial diseases, and not much probability of its discovery.

Acceptance of the germ theory, of course leads to the employment

of germicide medicines, or the so called antiseptics, which have not seemed to have much effect in controlling the disease.

The most satisfactory results are obtained from the combination of both local and general treatment. The following is that which appears to give the best results and is sanctioned by the majority of leading medical minds.

The General Treatment may be considered under the three heads foods, stimulants and tonics.

Beef-tea, milk and farinaceous food &c. should be administered very

two or three hours. freely, without
overtaxing the digestive organs, for
every practitioners of experience knows
how how very essential it is that
the patients, as far as possible, re-
tain their flesh and strength.
In mild forms of diphtheria, when
no complications exist, the cases
usually terminate ~~fatally~~ favorably
without the use of any stimulants;
but there are many cases, on the
other hand, characterized by pal-
lor of surface, marked weakness
of circulation tendency to pros-
tration, great enlargement of the
cervical glands and extensive
disease of the throat, accompanied

by loss of strength, flesh and appetite, indicating danger from diphtheritic or septic infection, in which stimulants freely administered, are positively required.

Again, all physicians who are familiar with diphtheria have noticed the pallor, loss of appetite and strength which commence before the close of the first week, when the use of Iron is at once suggested as the proper remedy to arrest this blood change.

The tincture of the chloride of iron is the form commonly used, in large and frequent doses.

Chlorate of potassium, which

exert such a curative action on all bucal and pharyngeal inflammations (as stomatitis &c) may be combined with iron.

The following will be found to be a useful prescription.

℞. Tr. ferri chloridi ℥ij
Potass. chlorat. ℥j
Syr. simp. ℥iv

Dose. one teaspoonful every two hours for a child 3 years old.

or

℞. Tr ferri chlor. ℥ij
Potass chlorat. ℥j
Glycerinae ℥ss
Aqua q.s. ad. ℥iij ss

Sig. ℥j every hour or two.

or the following will be found

is a very useful prescription

℞ Quiniæ Sulph. gr. x
Soda. Chlor. ʒij
Sp. ætheris nitr. ʒj
Syr. Simplex ℥xv

S. ʒj every 3 hours.

If much fever exists Quinia should be given in sufficient quantity to keep the temperature within bounds

If the bowels be constipated a mild laxative should be given.

Lately diphtheria has been treated by a great many practioners with Mercury and it is claimed with a marked degree of success. Large doses being given frequently. 1/32 to 1/20 and

from $\frac{1}{6}$ to $\frac{1}{3}$ of a grain of the corrosive chloride being given to a child every 3 or 4 hours. It is not known positively in what way it exerts its influence for good. It can be given alone or in combination with the Tr. of the chloride of iron and chlorate of potassium.

The Local Treatment should have for its aim the destruction of the diphtheritic poison, and to prevent the absorption of septic poison, if any form. Care must be taken in applying substances to the parts, so that the pseudo membrane is not forcibly removed. therefore, a sponge or other hard substances should not be used in making local applications

as they are likely to do harm.
The best mode of applying most mixtures employed is by the use of the hand atomizer.
Plain lime water is one of the best solvents of the pseudo-membrane known, and can be used as a gargle or as a spray.
Carbolic Acid is also a very decline- bin agent to the pseudo membrane.
The following mixture may be em- ployed ℞ Acid. Carbolic, ℥ss
Aqua Calcis ℥viij
The atomizer should be employed every one or two hours.
In most cases of diphtheritic inflam- mation of the fauces the foregoing will suffice

for the local treatment, but the follow-
ing mixture, says Smith, applied by
a large camels hair pencil is very ef-
ficient in converting, immediately, the
pseudo membrane into an inert
mass, and putting a stop to all mov-
ments of the bacteria which swarm in
it.

℞.

Acid. Carbolic. gr x
Liq. Ferri Subsulphat. ʒj
Glycerine ʒiij

J. F. Hebrank

Report

Enteric Fever

Admitted

Dec 7/83

F. B. Louderbaugh

Enteric fever [illegible]

To the Faculty of [illegible]

Gentlemen

Therein gave [illegible] ations of the general course of [illegible] of Typhoid fever, including the diagnosis the complications and treatment with pathological appearances and conditions of two Post Mortem Examinations.

Enteric fever as I think a more correct and [illegible] term is an acute specific disease [illegible] infections and [illegible] with a peculiar eruption on the skin and disease of the solitary [illegible] ed

glands of the intestines. The period of incubation is about a fortnight. Symptoms.- Sometimes the disease runs so quiet a course, that but the very slightest symptoms manifest themselves; but these are most significant, loss of muscular power and heat of the skin, as shown by thermometer under axilla or tongue. And it is important to be aware, such a case may become fatal suddenly in third or fourth week, and that such a case will be required to be treated with the same care and precaution that we should give to the [illegible] manifesting any or all of the more alarming symptoms.

I shall now discuss. The first in importance and one often observed which is diarrhea, it may be slight or severe. Sometimes so slight that the patient or the patients attendants will not mention it unless ask if it existed; with this symptom is found in the adult, associated frontal headache; and sometimes towards night, neither hot skin and some thirst. The motions are pasty in character with an offensive smell. The tongue is dry, red at the tip, and fissured. The urine scanty and high coloured. The pulse is variable, and it may rise or fall

without affecting the heat of skin, or without affording any indication that the patient is better or worse. Between the eighth & twelfth day of the disease careful search will reveal the eruption. This is found consisted of rose colored spots, elevated slightly above the skin, disappearing on pressure. Eruption may last from two to five days, when it disappears, while fresh ones keep coming out. The spots occur upon the back, chest & abdomen, and I found the number varying considerably, nor did the number prognosticate any thing of the severity of the attack.

Bowel symptoms are frequently manifesting themselves, such as vomiting, obstinate excessive diarrhoea, with tenderness over the abdomen, particularly over the right iliac fossa. Here gurgling may also be heard, & sometimes the abdomen tympanitic. The face looks worn and anxious. Often a short hacking cough, with some dyspnoea and harshness of breathing. Auscultation may reveal Bronchitis or Pneumonia. Epistaxis occasionally occurred, and in one case the gums bled. The pulse is often found significant in character. The symptoms

generally I found between the third week and the patient become better, or the disease goes on. and may terminate in exhaustion or hemorrhage from the bowels. or perforation of the bowels owing to the disease in the patches of Peyer. When the bowels suddenly become re-distended in character in third week especially with tenderness and distention of abdomen where the proper precautions were not taken to prevent we had hemorrhage. And I did not find it in one case until after the fourth week. But perforation may occur up to the fifth week. I also found mucous

tremor out of proportion to the de-
lirium is a grave prognostic.
Again I found that a pulse any
130 per minute was a grave sign.
Again I believe if headache and de-
lirium coexist we may expect cer-
ebral complications. Bronchitis &
Pneumonia I found frequent compli-
cations, And in one case that I
saw the active deposit of tubercle
was excited. The case being of
scrofulous diathesis before the at-
tack of fever. In a fatal case of
Perforation the symptoms preceding
it were, some signs of Peritonitis,
with tympanites, and vomiting,
when a sudden paroxysm

& intense abdominal pain indicates the point had occurred.

Post-mortem appearances.

Peyers glands were found in every stage of inflammation. From the slightest swelling to the severest form of ulceration & sloughing. I found the more distinctive changes situated nearest the caecal valve. The mesenteric glands were congested and softened and swollen. Spleen and liver were enlarged and softened

Diagnosis

From Typhus the locality in which the disease was found.
From Remittent fever by the

absence of vomiting in the beginning of attack, and the absence of yellowness of skin. the slower onset, the more protracted course. mental dullness, and drowsiness and the abdominal symptoms.

Treatment

Of foremost importance is to place if possible the patient in a large well ventilated room. The proper precautions against infection should be practiced. Then great cleanliness will be necessary all stools and secretions removed and disinfected by Condy's fluid or carbolic acid. The diet will require at first to be plain

simple unstimulating in most cases. Such as beef tea, veal tea and chicken broth. The starchy foods must be sparingly given lest diarrhoea be provoked. Light puddings and milk can be allowed. The use of wine requires cautions and restrictions if the patient is doing well during the first three weeks of the disease; but if towards the latter part of the disease there is much exhaustion it is required to get the patient through the disease. Coma and muscular tremor are symptoms calling for stimulants, and again evident

flagging of hearts action is an indication of its requirement. But I believe if there is any doubt as to the propriety of giving a stimulant. it is better not to give it. As to medicines purgatives are to be avoided. In exceptional conditions imperatively called for small doses of castor oil will be the safest & best medicant. I found it often necessary to check diarrhoea. for this purpose mild doses of chalk and red gum. Sulphuric acid and opium. An enema of starch and opium.. also Ergot and turpentine. may be employed

Then I found covering the abdomen with warm moist flannel. well sprinkled with turpentine acted advantageously. For symptoms of cerebral congestion head must be shaved and cold applied. Bleeding is generally inadmissible. Turpentine I found the best remedy for tympanitis. I found hemorhage not necessarily fatal. it should be treated with astringents. and should perforation occur I should be tempted to not entirely lock up the bowels. as one fatal case I saw the bowels were locked up and the patient aparently

not exausted died on second day after perforation. When symptoms of Pneumonia arose Mustard Epithems and turpentine stupes were successfully employed. Bronchitis generally required stimulating expectorants as the phlegm was generally tenacious and ropy.

During convalescence I found the diet should be carefully attended to as I found errors in diet not only bring back diarrhoea but in one case prove fatal. And in country practice it is harder work to impress this upon the friends than it is to treat the case of fever.

I would say a word of the treatment by cool bath. I positively would not use the cool bath. as I saw a death occur only five minutes after its use by one of its advocates. I would always in cases requiring it use the tepid sponge bath. from which nothing can come but good in cases requiring its use,

Yours truly
F. B. Sonderbaugh

Thesis

on

Thrombosis of Portal Vein

by

Philipp Heldrich

Germany

February, 1873.

Although the occlusion of the lumen of the vessel is most frequently brought about by the coagulation of blood, it is also caused by other morbid processes, for instance by compression on part of pathological nature, by the intrusion of cancerous substances into the lumen etc.

Thrombosis of some parts is not infrequently the result of inflammation of the walls of the vessel, far more frequently however the former is the cause of the latter. Occasionally, especially in cases far advanced, I think it becomes difficult to ascertain, whether the thrombosis or the Phlebitis has been the

primary lesion. The most of the older cases of this kind are not so distinct and fully described, as that one could come to a definite conclusion concerning the relative dependence of the inflammation of the wall of the vein and the thrombosis itself.

Etiology.

A coagulation in the portal arterial system may arise, as in other bloodvessels.

I In consequence of debility of the hearts action, occaisoned by Marasmus, this occurs generally shortly before death or during a long continued agony and is at the same

time accompanied by Thrombosis in other Veins or in the heart itself. Dr. Frerichs observed this in one case of Thrombosis in the portal artery as a globular vegetation between the parts of the left auriculo-ventricular valve with thrombosis of Vena jugularis, subclavia sinistra and vena hepatica and in an other case Dr. West found a thrombosis in the Vena cava inferior, besides the one in the Portal (artery) vein.

II. In consequence of Compression exerted upon the branches of the Liver or on the trunk of the portal artery and their capillaries, this comparatively is the most frequent

cause ation – it is brought on by the following conditions

a.) By the various diseases of the Liver, which destroy numerous capillaries and more or less contract or totally occlude branches of the Vena porta. Simple or granulated induration, especially, Cirhosis, Syphilis and chronic Atrophy of the Liver in advanced stages give rise to Thrombosis in the portal vein.

b.) By the various sorts of tumors of and on the Liver, which more or less contract the trunk of the portal vein or its main branches or the central termination

of venae lineales or superior mesenteric vein. This is the cause of the majority of cases Thrombosis but not of all. According to Virchow, Rokitanski, Cohnheim & Rindfleisch the tumors pressing on the trunk of portal vein are those of the cancerous, lymphatic, sarcomatous, cheesy, tubercular kind and leucaemic tumefactions at the porta hepatis, especially in the lig. hepato-duoden. and in the corresponding posterior space of the peritoneum, then also gallstones cleft in among the Carcinoma of the Stomach, Pancreas and Duodenum.

III. A Thrombosis of the portal vein on its trunk and its two main branches is sometimes caused in the following manner – a thrombosis is formed in the termination of a minute portal arteriole, in some way or other this then extends into the main trunk of the portal vein by the formation of sediments of new coagulations and blood clots. This form of thrombosis according some authors is generally of a suppurative character. Adhaesive Phlebitis of the larger branches of the portal vein, which are contained within the liver, is the

cause of lobulated liver according to Rokitansky. According to Virchow however, this is able to be retraced to syphilitic and irregular interstitial hepatitis most frequently excepting congenital lobulation of the Liver — rupture sometimes found in the branches of the portal vein is to be designated as a secondary process, while obliteration of this vessel is certainly a process previous to atrophy. The occlusion of branches of the portal vein being in some cases introduced by coagulations that have minigrated into them, these the result of continued interni-

tents

in addition to other morbid conditions, such as tumors of the spleen, this circumstance may possibly be the cause of such processes of obliteration.

As it is known at present that a long continued malarious disease may produce a diffuse interstitial Hepatitis, which presents the appearances of an atrophied or hypertrophic cirrhosis of the Liver; it would not be difficult to suppose that occasionally a circumscribed form of chronic Hepatitis may arise under the influence of Malaria; in this case the lesion would be similar to a syphilitic one, without exactly

presenting gummata like new growth however, and the obliteration of the portal vein branches would then be secondary. Although Thrombosis may frequently appear as resulting from Phlebitis, they generally have their origin in the suppurative Phlebitis. One case of Thrombosis of the trunk of the portal vein, I myself observed; it was consequent upon a tumor as large as a fist on the superior margin of the Pancreas and resulting from an external injury.

Pathological Anatomy.

The anatomical changes appearing in Thrombosis and adhesive Phlebitis do not present any marked differences

from those of simple Thrombosis and Phlebitis. The fresh rapidly formed Thrombus, is of a bloody red color, soft, moist, homogeneous, very indistinctly stratified and not adherend to the wall of the bloodvessel. The slowly formed Thrombus presents a stratified appearance; Red and white layers consisting of fibres and white bloodcorpuscles are alternately arranged in such coagulations. As long as the Thrombus is fresh it is soft and moist, after some time however it becomes dry & more brittle. Its strata gradually become dissolved first becoming brown and later of a yellowish gray color. At this period there occurs a central ner-

rosis,

in which the Thrombus acquires a compact cheesy consistence in the centre — this necrosis rarely starts at the liver branches of the portal vein, which would change these respective vessels into compact, solid strings. The Thrombus of Vena Porta is generally one which obstructs the entire lumen of this vessel. The terminations ordinarely pass over into clots that have more recently been formed, of a more loose and spongy consistence and gradually disappearing in the liquid blood; The termination turned towards the Liver and of older Thrombi is rarely formed semispherical or conical. The Thrombus is either confined

to the branches of the Liver or its roots, really to the Main-trunks alone. Frequently the branches of the Vena porta or the terminations of this vessel or even the two other ends are found to be occluded by a thrombus of greater or less extent. If the thrombus is not confined to the terminations of the portal vein then the main trunk is more or less expanded. The walls of the portal vein are not changed to any considerable extent in new cases, in older cases however signs of a more or less advanced chronic Phlebitis are presented. The intima becomes tomished, turbid brittle and of a dirty grayish yellow color. The adventitia becomes

thicker, very vascular, in very old cases it may result in hypertrophy of connective tissue, also in fatty degeneration, occasionally even in calcareous degeneration of the veins. According to different etiological instants, we find different peculiar characteristics in Thrombosis of the portal vein. Thus in the Thrombosis, as this usually appears shortly before death or during a long continued agony, the Thrombus is generally fresh and the consequent signs incompletely developed, in such a case not only the main trunk, but also the branches and the larger terminations of the portal vein are found to be occluded by Thrombosis, and

not rarely Thrombi make their appearance in other vessels. The Thrombosis of the Vena porta in Cirrhosis, chronic atrophy and syphilitic inflammation of the Liver, is not only confined to a few single branches, but appears to be extended over branches and the main arm of the trunk of the vessel. The latter itself is expanded and enlarged and the walls in a condition of a more or less advanced chronic inflammation. Under these circumstances authors claim to have frequently found lamina of bone in form of fine scales or larger circularly formed lamellae in the lumen of the portal vein. Cases of Thrombosis of Vena porta as resulting

from Cirrhosis of the Liver have been published by many known Pathologists. In case of Cancer of the Liver the Thrombosis is mostly confined to single branches of the vessel, those which are compressed by the Carcinoma, in this case the fatal coagulation rarely expands. — The constriction and occlusion of the main trunk and of the central termination of the large radicals of the portal vein, produces a damming up of blood in the region enclosing the minute radicals, in the latter, and after a lapse of time it leads to the development of collateral circulation & finally it may lead to certain anatomical changes in the structure of the

liver, owing to insufficient blood supply to this organ. Consequent upon a damming up of blood in the radicals of the portal vein, there may result a varicose dilatation of the latter vessel, accompanied by hyperaemia and catarrh of the Stomach and of the mucous membranes of the intestines - also hemorrhages in the latter and on their surface - frequently even Ascites and swelling of the Spleen. If the occlusion of the main trunk and the branches of the portal vein occurs suddenly, then a fatal termination will ensue, rapidly in consequence upon hemorrhages from the Stomach and intestines, perhaps also consequent upon surcharging

the blood with products of the gall, since there does not seem to be sufficient time for the formation of collateral circulation. If the occlusion progresses slowly it may give rise to Thrombosis, which according to the magnitude of its extension may more or less diminish the symptoms of the damming up of the blood or even not allow the latter process to take place at all.

The character of the collateral circulation will differ according to the circumstance wether the capillaries and smaller branchings or the main trunk and larger branches of the portal vein are occluded. If the former is the condition, the collateral circulation will be as in

Cirrhosis of the Liver. If the main trunk and the larger branches of the portal vein are obstructed, the collateral circulation occurs in the same manner, except that the umbilical vein which terminates in the left branch of the portal vein, can not be employed for this purpose, because, even if this left branch of the portal vein were not occluded, but the thrombosis on closing up the main trunk - the pressure in this branch would be far less than under normal circumstances.

At an occlusion of the Portal vein and its larger branches the function of the Liver does not cease, it is only more or less injured. This is explained by

two conditions, first, that the arterial blood is used by the liver in performing its function, and secondarly, that in this proposed case the liver would be supplied through the accessory veins of Sappey with a certain number of interstitial veins and with blood from the radicals of portal vein. The veins of Sappey form the following groups: I Group is the gastro hepatic ligament arises at the greater curvature of the stomach and terminates in the ~~lobules~~, in front and behind the transverse fissure of the Liver. II group consists of small veins which arise in the base of the gallbladder and enter into the substance of the liver at the mar-

gin

of the depression for the gallbladder — these anastomose with two veins of the gallbladder which terminate in the right branch of the portal vein. III group comprises those minute veins which have their origin in the capsule of Glisson in the walls of the hepatic artery of the portal vein and in the gall-ducts, these decide and bifurcate in the subjacent lobules of the liver. The IV group consist of fine branches which are situated in the suspensory ligament and constitute the communications between the structures of the liver and the omentum. The V group is composed of several very small veins which have their origin in that part of

of the linea alba which is situated above the umbilicus – one of them is somewhat larger than the rest and runs along the attachement of the suspensory ligament to the left longitudinal fissure of the Liver and contains valves which are turned towards this organ. Two or three others are situated in the range of the obliterated umbilical vein, one of these terminates in the left branch of the portal vein. This accessory branches of the portal vein is known under the name of the Vena paraumbilicalis – Now if the main trunk of the portal vein is occluded, the blood pressure in its branches is reduced considerably and a different

supply of blood is conducted through the accessory veins to the liver, by means of the radicals of the portal vein now under an increased pressure; as well as by means of the branchings of the Vena cava system. This afflux of blood of the portal vein occurs through veins, which to the greater part are identical with the first group of Sappey's veins. These are the several veins of the gallbladder, which on the one hand enter into the portal vein immediatly at the point where this enters the substance of the Liver, and on the other they stand in connection, by numerous delicate anastomoses, with the main trunks veins

of the gall structures and with those veins which enter into the vena gastrica according Heschel occasionaly enters into the branch of the portal vein which supplies the left lobe of the liver. This organ itself appears anaemic and weak in case of rapid obliteration of the portal vein, after this condition has existed for some time the liver is found diminished in size, anaemic, resisting and tough, the surface may be scarred or granulated according to the circumstance wether the organ is in a state of chronic atrophy or even atrophied cirrhosis of Liver.

Now while the majority of physicians

accept that Thrombosis of the portal vein when in connection with the just named morbid processes, it is the result of these, yet there are others who assert that the condition of circumstances may be reversed and that we may have by hypertrophy of connective tisue in the liver, as the result of vena porta occlusions. This view has however not yet beene satisfactorily supported.

Clinical History.

The adhaesive Pylophlebitis only then gives rise to appreciable phenomene, when it occludes the lumen considerably or totaly of a.) the main trunk of the portal vein

b.) the larger branches c.) or a greater number of the smaller liver branchings d.) or finally the central terminations of the principle vein radicles. This all being the case provided the pylephlebitis will not be accompanied by atrophying cirrhosis of the liver. In case of occlusion of single branches of the liver no other appearances are noticable besides frequent evacuation of liquid pale yellowish feces, symptoms of anaemia and gradually developing dropsy, anasarca etc. In adhesive Pylephlebitis of the main trunk and the larger branches of the portal vein after the symptoms of the primitive

morbid process have for some time
preceeded and after in single ca-
ses slight pains have perhaps been
experienced; the appearances of
the damming up of blood in the
region of radicals of the portal vein
are more or lefs rapidly developed;
also rapidly increasing Ascitas,
which soon necessitates the para-
centises of the abdomen and after
the operation rapidly renewing.-
then a rapid and a considerable
swelling of the Spleen.- increased
dilatation of the veins of the abdomi-
nal wall, espescially of those that
run towards the lower part of the
thorax and axillary space.- watery

or shiny, frequently bloody evacuations of the bowels, — not seldom vomiting, occassionaly vomiting of blood. — Scanty Sc-aind excretions of a dark and concentrated urine — rapid loss of strength and appearances of Cachexia. Under increasing exhaustion a fatal termination is bound to result more or less rapid. These symptoms are more or less rapid developed according to the fact, whether the thrombosis is brought about slowly or rapid or whether it is complete or incomplete or whether or not the collateral circulation is sufficiently well developed.

Symptoms.

The portal vein on account of its deep situation is imperviable to physical investigations. Large tumors in the vicinity of this vessel and pressing upon it, might perhaps by means of palpation be proven to exist, i. e. under favorable circumstances. The pain which is conditioned by the procep is not very intense, and is only occasionaly experienced when the inflammation of the vessel-wall resulting from thrombosis of portal-vein has become to some degree intense. The most important symptoms are conditioned

by the damming back of the blood into the radicales of the portal vein. One of the most constant symptoms is Ascites. In cases where a trifling a moderate Ascites existed before the occurrence of the constriction or even total occlusion of the portal vein, this will be rapidly and enormously increased when the thrombus forms. In those instances in which no symptoms of Ascites, resulting from the primitive disease, has made their appearence, the abdominal dropsy is in consequence of thrombosis of the portal vein developed exceedingly rapid, and is rapidly increased

to a threatening degree, this increase occuring more rapid in proportion to the rapidity of the formation of the Thrombus in the portal vein. This form of Ascites is very soon renewed after Paracentesis. In single cases Ascites does not make its appearance at all, either because the Thrombosis is one of a clot formed lately during a long continued agony, or certainly during a period shortly before death, or because the damming back of blood which led to the serous transudation, was equalized by profused gastric or intestinal hemorrhages, or finally because a sufficiently complete collateral circulation

has developed itself. Swelling of the spleen as frequently as Ascites, but it may be absent from the same causes as those which were above related to ascites, and in addition to those the cause, that the organ owing to preceding disease may have lost its power of expansibility Swelling of the Spleen is also rapidly developed. Dilatation of the abdominal veins is only observed in half of all cases. The so called „caput Medusae" is very rarely developed, as the vena paraumbilicalis or umbilicalis empties itself into the left branch of the portal vein, which most commonly is itself thrombosed and can very

rarely be made clear for the blood-current. Only those veins of the abdominal wall are most commonly involved which run from the epigastric region towards the Thorax; the venae epigastricae then, with the current of blood directed upwards, as it is customary to be observed, in advanced Ascites by which compression of the vena cava ascendens is caused, or in constriction or total occlusion of this vessel and also in other instances. Diarrhoea occurs comparatively as often as Ascites. Gastric hemorrhages occur occasionaly and are so profuse, that they may produce a fatal termination before other appearances

of Thrombosis of the Portal vein can be developed. Some observers of this disease declare to have noticed increased appetite, which circumstance (if it be a fact) I am unable to explain. The Urin is scanty and concentrated in Cirrhosis of the Liver and frequently contains sediments of acid salts and albumen. The liver is generaly diminished in size and only in rare cases it is normal or enlarged. The latter is commonly only observed when the Thrombosis has occurred together with scirrhus. The decrease in size of the organ is either a result of the occlusion of the

occlusion of Portal vein, or of the general disease of the liver which is conditioned by a Thrombosis. Icterus a condition brought on by pressure on the gall-duct, is rarely observed. The secretion of the gall is not greatly interfered with, in Thrombosis of the portal vein, which is explained by the fact, that in case of an occlusion of this vessel, the material necessary for the function of the gall is conducted it (not altogether but) in somewhat sufficient quantity by the accessory portal veins. Fever symptoms are absent. Rapid emaciation and loss of strength occasionlly scorbutical symptoms,

are soon apparent, which is partly explained by the pressure exerted on the vena cava ascendens by an enormous Ascites; by an increased blood pressure in the area of the vena cava inferior, by the streaming in of blood which cannot find its way through the occluded vena porta, and finally by Cachexia.

Diagnosis.

Although single members of the medical profession consider this a task connected with little difficulty, yet the diagnosis of the morbid condition which constitutes the theme of our treatise

is nearly an impossibility. We are inclined to be of the opinion of Dr. Bamberger and Sternegger and others, who believe also that a diagnosis if not altogether impossible, is under all conditions connected with considerable difficulties. In those cases however in which the symptoms of the damming back of blood in the region of the portal vein are either altogether or at least to a greater part missing, a diagnosis of thrombosis venae portae can not be thought of. But even in cases in which either all or at last the most important symptoms of the damming back of blood are

distinctly developed, the nearest conclusion that can be made is that the circulation in the region of the Vena porta is considerably interfered with, or entirely suspended. The position which this cause or obstacle to the current of the blood occupies and its quality, must be attempted to treat, by the most accurate consideration of the results of physical examination, of the peculiarities of individual symptoms, of the process of the clinical instances, and of the morbid conditions which may contemporaneously exist in other organs.

This in the majority of cases is a very difficult problem and frequently impossible to be solved. If the symptoms of retardation are distinctly expressed and a high degree of ascites present, then the establishment of tumors in the vicinity of the portal vein is not to be spoken of; even after paracentesis has been performed such is rarely accomplished. And even if it should be accomplished to prove the existence of processes which may give rise to Thrombosis of the portal vein, yet this fact could with great uncertainity only be rentered practically of value for the diagnosis; For there are cases recorded in which cancer

of the Liver and of the glands of the part of the Liver were present in addition to Cirrhosis.

Prognosis.

The course of the disease is either acute or chronic. The duration of the process is generally a comparatively short one, lasting from a few days to several weeks. In exceptional cases the process continues for several months.

The prognosis is to be given, according to our present experience as absolute fatal. Even though in very rare cases by the developement of a tolerably sufficient

collateral circulation, life may be prolonged for years. Death follows resulting either from the primitive cause, or from frequent gastric intestinal hemorrhages, or from a grade of Ascites and its consequences, from Cholaemia or Peritonitis, or finally from certain complications as Pneumonia, Pericarditis and Erysipelas.

Therapy.

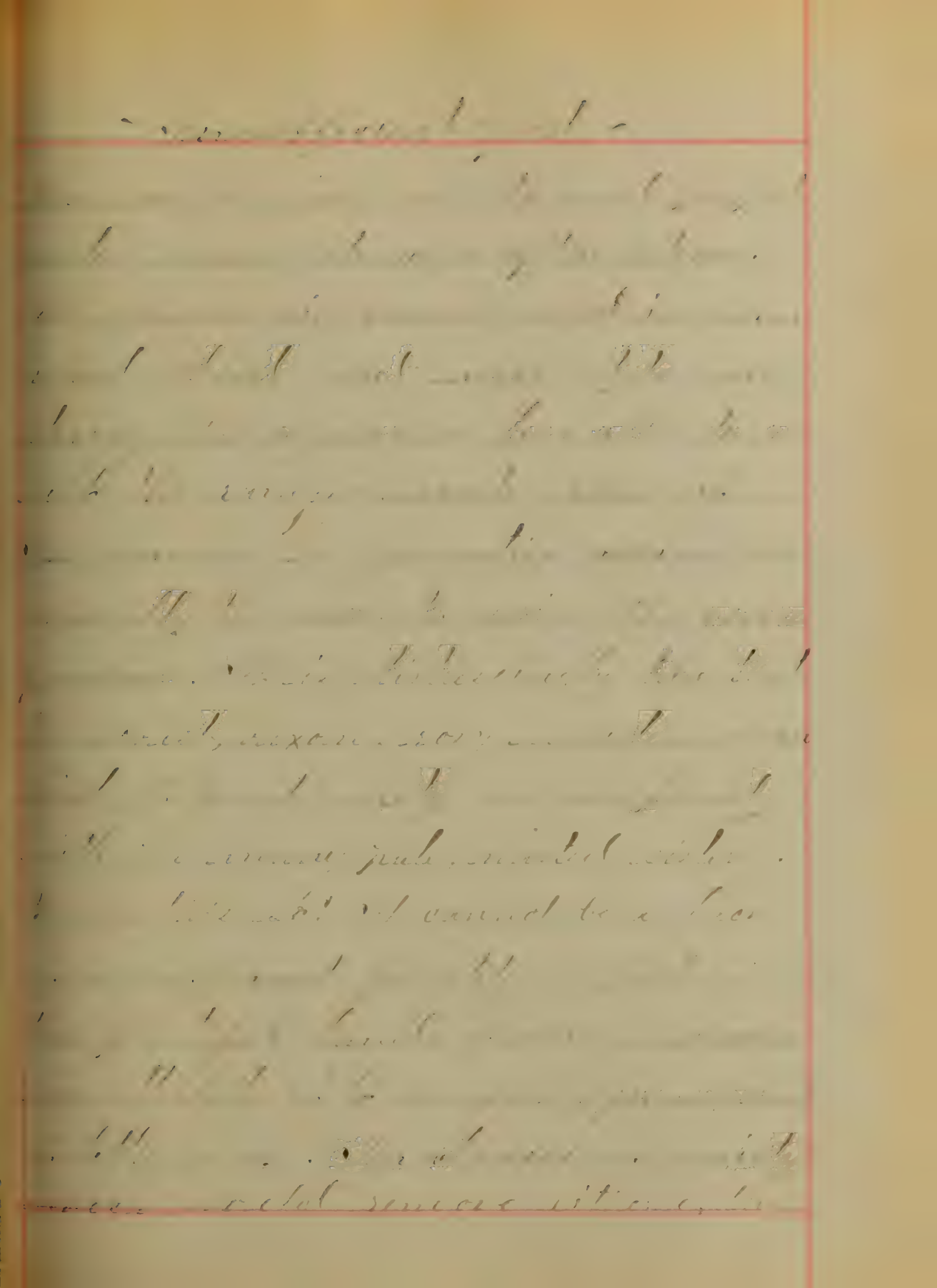
The treatment is symptomatic, the same principles being applicable to it as to Cirrhosis.-

The process which forms the basis of Thrombosis of the portal vein must as is self evident find the

proper and requisite consideration.

February, 1883.

Philipp Heldrich.



Hepatic Abscess.

Wilbert Bennett.

The ancient Pathologists [illegible]signed a very comprehensive definition [illegible] [illegible] most all affections of the liver, especially such as are attended by pain. [illegible] the sick-bed, therefore, the diagnosis [illegible] frequently made, affections of the adjacent organs—those of the right [illegible], the [illegible] connected with it.

[illegible]

[illegible] although perhaps in itself admissible, [illegible] as yet, been proven. The theory [illegible] [illegible] [illegible] the direct emerging of the terminal [illegible] [illegible] [illegible] way is furnished by which even quite [illegible] emboli can pass from the system [illegible] veins into the hepatic artery, appears [illegible] [illegible] [illegible] ought to be produced in the man[illegible] above indicated, from suppuration [illegible] [illegible] [illegible] one of the most common occurrences

the hyperemic zone. They form one of the concomitants of so called pyaemia, and appear in all the manifold diseases in which this lesion is consecutively developed. They are, however, far less frequent than the [illegible] [illegible] of hospital disease, [illegible] [illegible] [illegible] occurs to eight in the liver.

[illegible] the fact that [illegible] [illegible] which on the other hand are found quite frequently in

[illegible]
[illegible]
...ks of Hippocrates as a symptom of hepatic ab...
...occasion about half the cases, usually
...esion shortly after and less frequently sim-
...ltaneously with the pain in the liver.
...ffects as a rule, the region of the shoulder;
...extends, however, up the side of the neck,
...ward over the scapula or down the arm.
...abnormal sensation is described sometimes
[illegible]
...r, or, at other times, as a severe burning, shoot-
[illegible]
...pain in the liver assumes relatively a
[illegible]
[illegible]
...pressure in the hepatic region, and at

[illegible]

[illegible] constipation [illegible]

[illegible]

Diagnosis.

[illegible] most valuable diagnostic characters of he[illegible] [illegible] abscess are, a severe, gnawing, aching, or [illegible] throbbing pain in the hypochondriac and scapular [illegible] regions, marked enlargement of the liver, [illegible] [illegible] [illegible] [illegible] [illegible] of the eye and skin.

[illegible] the matter accumulates and nears the [illegible] [illegible] [illegible] [illegible]

[illegible]

[illegible] as an accompaniment of pyaemia, as [illegible] some others preceding from affections of the gall ducts.

[illegible] of the lower lobe of the right lung [illegible] be studied with great care, in order [illegible] determine as to the presence of an hepat[illegible] abscess.

[illegible]

[illegible]ative hepatitis terminates much more [illegible]ently in death than in recovery. In [illegible] endemic form in North Africa there [illegible] fatal cases.

[illegible]

[illegible]

a little precaution as necessary, [illegible]

[illegible]

[illegible]

[illegible] the [illegible] may [illegible]

the [illegible] [illegible] the [illegible]

[illegible] the air.

[illegible]

[illegible]

diet, Hygiene, and out of door life, in

[illegible]

be more important than indications.

Puerperal Mania

Trait. Thomas M.D.

Virginia

1883

Pernicious Anæmia.

While any of the innumerable diseases of our race are calculated to excite the commiseration of the physician it is probable that none so completely enlists his sympathy as the class of troubles upon which we now propose to write. "With a great many of the ills to which flesh is heir", the liability is greater among particular classes who present the condition of health and circumstances that favor development. In one case it is the poor and ill fed or exposed, as happens in scurvy, in another, it is among the wealthy idle or overfed, as occurs in gout. Here however we have a ghastly visitor who in most of its forms "knocks with equal tread

at the palace of the rich as at the hut of the poor. If any distinction is there we will find our cases among the nervous and irritable rather than the sluggish or robust. "It has been remarked by Esquirol" that we most frequently meet with cases of puerperal mania among those miserable outcasts of society, whose sensibilities have not yet been destroyed, and who dwell upon their fallen condition. The older obstetricians, disregarding the nice divisions and distinctions of our modern physiological science, under the head of Puerperal Mania, classed all of the mental affections of pregnancy and parturition, nor do we believe that

the error would have amounted to much, but they not also tended to confound the treatment of different affections under a common method. We may safely follow their lead to the extent of using an inclusive term, yet while we shall call all cases "Puerperal," which occurs during pregnancy, at or after labor; - including the period of Lactation, yet we shall distinguish by periods, with sub-divisions from Cause, viz:

I Insanity of Pregnancy.

II Puerperal Insanity - (properly so called, and occurring within a limited period after delivery)

III Insanity of Lactation.

Under each heading we will consider

varieties in order, this classification is both natural & practical, and will include all cases likely to fall under the observation of a Physician. Regarding the relative frequency of these classes no accurate determination can be made without large and accurate statistical observation such as we have not the opportunity to make, — however we find on record, and combine, the observations of Drs Tuke and Marce, made respectively in Edinburg and Paris. One hundred and two cases occurred in the former and three hundred and two in the latter city. These give the following relative per cent.

Insanity of Pregnancy, Puerperal Insanity
13.06 52.67

Insanity of Lactation
33.19.

I Insanity of Pregnancy, While the period of its occurrence varies yet we may generally look for it during the third and fourth months. The forms generally assumed are - A. Active Mania, B. Melancholia, C. Transient Mania. Most usually we have the first two forms mixed or working simultaneously upon the same patient, - but the general rule may be enunciated as follows, - Melancholia exerts its force during the earlier part of the term, - acute mania in the other

have generally make its onset after the third month, and when it occurs it is apt to continue through the term of pregnancy, nor is it by any means certain that it will cease with the advent of the factor thus, though such cases are met with often enough to occasion hope. In actual practice it is impossible to class the varieties of Acute Mania from those of Melancholia in more than a general manner, nor is it desirable except for prognosis, a general diagnosis fulfills every purpose. The outlines may be briefly presented as follows: The patient is restless and uneasy, often times with the eyes are ...

or yearning — [illegible] suggest sleeplessness — almost beyond the control of anodynes — Wearies patient and nurse. The suicidal tendency is generally marked, nor do they come clean about the manner. Sometimes persistent efforts are made towards strangling, and the homicidal mania is not uncommon. When infants and little children are around they are never safe from injury. Often the patient will sit abstracted and in a state of sullen obstinacy, at times they are terrified in wild vision, which when expressed in words closely parallels the similar experience in Delirium Tremens. The moral faculties generally become

parents, Kleptomania, Dipsomania, Pyromania, and indeed any of the protean forms of mania, may come into exercise. The opposite propensity becomes morbid, and a symptom that sometimes exists in some pregnant women, — namely a tendency to eat trashy and indigestible articles, — is generally prominent. When Kleptomania occurs it will probably continue, — unless the patient miscarry, — until a natural child is born, and this condition has been known to run through several incomplete pregnancies in succession, Rank, affluence, and moral culture, seem in this case to exert no influence. In milder forms

patients who have been allowed the privilege of going at liberty, have been known to purchase several dollars worth of goods, for the chance to appropriate some trifling article not worth but a few cents, and which they have given or thrown away after obtaining. Under such influence deeds may be committed, without the least evil design, that is ordinarily criminal. We know of a case in which a pregnant woman placed an infant in a horse trough filled with water, and firmly insisted afterwards that it was a duck. Sometimes a spirit of wild mischief takes possession of the patient, as in the case related to us by a

physician, of a patient who chased off a roomful of female visitors, with her hands full of stomach worms that she had just discharged. It is truly remarked that the line of demarkation between sanity and insanity is narrow, - all women view pregnancy with more or less dread, and when this becomes intensified it really passes into a form of melancholy, what is flippantly called "hysterics," when increased in degree is insanity, - just as what is termed eccentricity, when augmented becomes craziness. That dread is a factor in the disease upon which we treat is easily seen when we observe

that primiparae are more liable to the insanity of pregnancy than Multiparae, this dread increased, sometimes by hereditary predisposition, by certain neuroses, by drunkenness, the opium habit, epilepsy, scrofula, the predisposing age, (between 30 & 40) and other causes intensifies to such degree that the patient looses self-control; then they are insane. In the first stage of the disease the patient is often aware that she is under some strange illusory experience, which is oppressing her mind and chaining her will. Her knowledge of the fact is the index of her sanity, the unknowing

of the mind consists in acting on an illusion. It is probable that patients sometimes vibrate between the two states, but ere long the morbid condition obtains sway in the mental courts.

Prognosis. Fortunately this is generally favorable and the more so as the disease approaches Melancholia, and recedes from acute Mania. Any complications from hereditary taint makes the prognosis more grave — so the physician should inquire regarding Epilepsy, Syphilis, scrofula, hysteria &c before forming an opinion. When the case presents a prostrated condition of system from anaemia, starvation, or inmitition, debility from exposure, mental grief

or anxiety, our ability to remove the complicating cause becomes an element of the prognosis. We cannot look for a cure generally before the termination of the pregnancy. While our forms acute mania and melancholia are so involved as to require a treatment in common; the third form which we now consider is almost sufficiently distinct to require separate classification. We refer to (c) Transient Mania, sometimes during difficult labor, especially in the case of Primiparae, when the head of the child is passing the os uteri or the perineum, the intense agony has been known to occasion this form of Mania, known as spectral vision

incoherence of thought and speech, and even homicidal impulses have been recorded as occasionally occurring among its symptoms, it becomes important to give it due weight in medico-legal view. The condition, should it exist long enough to permit treatment, requires the use of Chloroform, Ether, or Chloral Hydrate, the latter by mouth or injection into the rectum, and the former by the mouth or by inhalation, or some other prompt anodyne medicine.

It is likewise the duty of the obstetrician to watch lest in her struggles the mother may injure the half born child. This may be

readily accomplished by the forcible resistance of female attendants who are generally present.

II Puerperal Insanity (proper)

This may be defined as the insanity which occurs after labor, for a short but not accurately defined period. Probably a month will include almost all of the cases. Many remarks which we have made upon the Insanity of Pregnancy apply with almost equal force to the post-natal form of disease.

In Puerperal Insanity the cases presenting the Melancholy type are not so numerous as those which are marked by acute Mania.

While the acute form of the disease has been ascribed to various causes by different writers, it is probable that no theory comes as nearful-filling the requirement of an explanation, as that which ascribes the disease to a septic ferment, or an abnormal element in the circulation, as there is always a great liability to the formation of ulcers, ruptures, or bruises, and inflamed mucus or muco-pus surfaces, or the lining membrane of the genitalia at the time of the parturient effort, it naturally follows that if blood and brain poisoning (septaemia) can occur at all by absorption,

it will happen by selection of this time. Additional reasons are as follows:- After labor there are generally retained clots of blood, and often fragments of the placenta, when the proper attention is lacking, these, especially in summer, quickly become offensive, and septic enough to produce Metritis or blood poisoning. Although all will not accept this view - we believe it accords with observation. It is urged as an objection to the theory that in puerperal convulsions (eclampsia) the uraemia causes albuminuria, while in the Puerperal Insanity albuminuria generally exists at first,

and then rapidly disappears, with-
out carrying the disease off with it,
these Questions certainly prove that
eclampsia and Puerperal Insanity
have a common origin, and the
latter rests upon the fact that
probably all cases of pregnancy
are attended with albuminous
urine, and it may, so far as
known, be natural for the urine
to remain albuminous for a
short while after labor. If this
surmise is correct, then albuminaria
may be intercurrent, but not
causative of Puerperal, while with
Eclampsia it is both intercurrent
and causative, the frequent presence

of oedema in the worst cases of eclampsia, make it probable that the same pressure which occasions escape of serum from the veins into the cellular tissue, also interferes with the renal function, prevents the proper elimination of excreta by the kidneys, and ultimates in convulsions, by poisoning the spinal cord, or the other hand abraded surfaces absorb septic poison from retained clots, placental, or other uterine concomitants of the child. This circulates in the body, poisons the brain, and produces insanity. Other arguments may be adduced

in support of this view of the etiology of Puerperal Insanity. What practitioner is not aware that eclampsia generally subsides soon after the child is born; the pressure on the kidneys being removed they recommence their eliminating function and remove the uraemic poisons. Who has ever seen this quick return to health in Puerperal Insanity, A poison in all probability, self multiplying as the scrofulous and syphilitic virus, has charged the blood with its brethren, every where a septic particle lodges be it in liver, lungs or brain, it is a nucleus for an abscess.

Pyaemia that giant disease, mimicking at one time hepatic trouble, at another consumption in its breaking down stage, and at another any of the multiple diseases of the Brain, has found a lodgment and will not be dislodged quickly, in fact sometimes not at all. We have treated of some of the ultimate causes of Puerperal Insanity and we now take in consideration some that are simply predisposing. Among these to make our subject at all complete hereditary predisposition must be considered, all that has been said therefore upon the Insanity of Pregnancy

a septic has met with even greater force. Probably if all cases could be traced back we would find over one third hereditary, one writer (Reid) found forty five cases out of one hundred and eleven, that could be traced back — a fact of startling significance. This hereditary exhibit at first sight opposes the septic theory, — but the explanation is clear, some individuals, and even some families, are easily poisoned by substances which are only slightly active with others. We see this exhibited in the case of the poison oak. (Rhus toxicodendron) One person

handles it with impunity while another dares not touch, sometimes even hardly stands its presence without touching, when covered with dew. That certain systems eliminate poisons more actively than others also help to explain the fact, for this being granted - that excretory and absorbent power is hereditary - the organs themselves must present hereditary power or weakness, To sum up the argument - it is not really the disease which is inherited, but the condition of the system that makes a suitable subject for the disease. In this argument regarding septic poison we do-

not desire to advance it as exclusive of all others, He would be foolish who would say that because pepper will inflame the eye,- therefore nothing else can inflame it. The analogy between the acute mania's before and after delivery is too great to be disregarded. In the former case the poison may be icteric or even uraemic, with its force spent upon the brain rather than upon the spinal cord, In both cases the action may be from an hereditary, syphilitic, scorbutic, or other virus, with its action directed to the brain,- and in the forms of Melancholia the lack of nutrition.

and absence of haematin in the blood, may occasion as much disturbance, as a positive septic cause does in the acute ones.
Regarding the theory of septic poison, let me call the attention to a fact which without it is obscure, J. M. Duncan, in "Lectures on diseases of women," adverts to the prevalence of Uterus gravis as a factor in Eclampsia, and then (on page 73) speaks of its not being as often as common jaundice, and finally says that Eclampsia may exist without any yellow discoloration. Is it not probable that these so called cases of Puerperal convulsions,

which themselves present delirious symptoms, are really as much hypæmic as idiotic in their nature, the septic force acting upon the blood and rather than on the brain, - in which latter case we would have puerperal insanity. Symptoms of advent. The outbreak of this disease with slight modification will nearly apply to cases of mania in general. The countenance plainly tells the disease, and he who has seen a few cases can almost determine its advent by the eye of the patient. The face looks anxious, and may be either pale or flushed. - The general

Expression is out of restlessness, the timber becomes fitful and impatient, the mind is seriously impaired by loss of memory and vacillation, the patient becomes angry listless, obstinate, or sullenly silent, and will often repeat mechanically, as an echo, any remark that may be addressed to him. The nerves sometimes become rapid and incessant, — sleep is much disturbed, or frequently lacking, vague feelings of mistrust, — with watchfulness and premonition of evil, occurs. If opportunity offers attempts at chief murder may be made. Fear of death,

muttering, rubbing the inside of the lips with the hand, with immoral and indecent talk, are all laid down by authors as symptomatic of the disease, and it is probable that twice as much could be added as of common occurrence, for no two cases are identical, though they may present parallel similarities.

(B) Melancholia. When Puerperal Mania is of hypochondriacal or hysterical form, it of ... cannot be regarded as from septic absorption, but must be referred to the numberless depressing influences which are capable of acting on the nervous centres, — such as immunition, anaemia.

mental grief, scrofula, exposure &c.
While this form of Mania is much milder, it is also generally disposed to be more lasting in its action. With some cases recovery promptly occurs, others gradually increase in their intensity, and occasionally takes the patient to the grave, others again will fluctuate between better and worse, until they finally settle down into permanent dementia. Happily recovery is the general rule, and we may commonly read the result by the intensity of the symtoms, especially the degree of inflammatory action - occasionally this form will

occur in successive pregnancies, in such case the endeavour of the physician should be to remove exciting causes. Hereditary influence may have its weight in this as well as in the Insanity of Pregnancy.

Sometimes the delusion of the patients centres upon religious subjects, producing fear, dejection, and apprehension. Again they will claim that they have committed "the unpardonable sin," and with the self accusation exhibit intense dread of threatened "eternal damnation."

When the suicidal tendency becomes marked, patients require the closest and most careful

watching and even then they will sometimes succeed in self distinction, for their cunning is augmented to a remarkable degree, and their talents persisted in for days.

A common symptom is great listlessness, the patient being mute and motionless and only speaking and acting mechanically, and at once relapsing into her former state.

In this automaton condition she will frequently appear without wants or desires, eating only when food is urged upon her, and then in moderate quantities, and sometimes paying no regard to the calls of nature. Motionless as a statue

they will sit without sleep through the night, or if they are urged to recline on a bed it is not to rest, but to form phantasms from the flickering shadows, and worry the mind with endless misgivings. The countenance in Melancholia, while often colored, is frequently pale and sunken, and the pulse is generally accelerated. The common condition of the bowels is one of costiveness, being frequently very difficult to move. Naturally the tongue becomes furred, the breath foetid, and the mouth as dirty as a case of Typhoid fever. Frequently the chest and forehead

throat will not allow the use of solid food.

III Insanity of Lactation. While this is not so common as Puerperal Insanity, it is probably twice as frequent as the Insanity of Pregnancy, among its causes are to be ranked anything that has a tendency to produce anaemia, or Physical Exhaustion. Often protracted and heavy flooding we may always fear its advent. Also among women who have borne children very rapidly, and among those who have continued to nurse until their blood has become impoverished. Sometimes we meet with it where the constitution of the patient is so fragile that the attempt

at location was easily indicated from the beginning. Upon examining the heart of the patient or better still the veins of the neck we will readily detect abnormal sounds occasioned by the impoverished blood. As the disease is one of thin blood and feebleness, we naturally expect it to present hypochondriacal rather than maniacal symptoms. Should the form be violent, as occasionally happens, it will nevertheless generally prove more transient than in the true Puerperal form. While we may by removing the debilitating cause — generally relieve our patient with great rapidity, it is also equally

the fact that they are in much risk of passing, from this form of madness, into incurable dementia, then from any variety upon which we have treated. For a description of the symptoms of Melancholy from Lactation we refer to the full descriptions given of the complaint under the two preceding general headings, for there is a general resemblance between all cases of Melancholy and all cases of Mania among, ~~not~~ only all Puerperal cases, - but even among non pregnant women. Probably the most peculiar and diagnostic symptom of all others, - in these cases of uterine and nerve diseases, is the one

incidentally mentioned above, of immodesty. It was the opinion of Sir James Simpson, that the organ affected caused the type of the disease manifestation, and his theory is certainly carried out in the puerperal insanities. Such patients seem to dwell on sexual subjects, and we may look for the most obscene and disgusting language from those whom we have regarded as pure and virtuous. Self accusation of unchastity are very common, and it is said have resulted in cases of legal complication. It is always well for the medical attendant to bear this in mind, as by neglecting

it he may innocently involve himself in scandal;-

Post Mortem appearances,— The subject of morbid changes of the brain tissues and their relation to disease has never been clearly and fully studied,- nor does the profession deserve blame for remissness, for of all studies possible this is probably the most involving and apparently contradictory. In cases that were well marked, as from septaemia, as many as four distinct appearances have been found, without diagnostic symptoms during life,- and it is asserted that as many forms of disease have been found in the same brain. Ramsbottom tells

that when a peculiarly violent syphilis epidemic rages in a lying in hospital, of which he had charge, no morbid changes of consequence could be noticed in the brains after death, and he explained it by the quickness with which the patients were carried off. Probably no observation of the brain is of much value unless made by the microscope, - and some cases have recently, when so examined, indicated the commencement of inflamation by cloudy swelling, granular infiltration, and cell disintegration. The appearances as laid down by standard authors as occurring in Puerperal mania are

unusual fulness and sanguinity,
with an extremely empty condition
of the blood vessels, particularly
the veins – Tyler Smith says "no
constant morbid changes are found
within the head." Duration of cases
They generally extend from three to
six months. Sometimes the period of
illness remains a blank,
but in other cases the antipathies
then formed are retained. The chance
of ultimate recovery is much lessened
when the cases extend over six months,
and generally melancholia will out-
last acute mania. The duration is
also much determined by the
nursing and medical attention.

Proper nourish, cool well ventilated and somewhat darkened rooms, and gentle nurses are necessary for quick recovery.

Treatment - Only a few years ago there was a strong tendency to treat all cases of Puerperal mania by over active means. Then it was customary to bleed heavily, to shave the scalp, and cover the head with blisters, and to pour in Calomel ad libitum. The day for this potent treatment for all mental diseases has fortunately passed, and the method is now generally condemned, as not only useless, but is calculated to augment the chest wall.

from much greater stress is put upon judicious nursing - skilful watching, and plenty of nutritious and digestible food. By treating our cases as diseases of debility, we meet with more uniform success. In treating the insanity of Pregnancy we cannot act as boldly as we would in the other two forms, for regard for the unborn child requires that we should do nothing to help it prematurely into the world. Should we use purgatives, we should select those whose action is upon the duodenum preferably to such as aloes, which by their action on the rectum might occasion sympathetic

contractions of the womb, and we should first rely upon laxatives rather than cathartics. When the costiveness is great and the mouth and tongue foul, we had best use mercurials, in <u>minute</u> doses, until the fecal accumulation is started. For the melancholia we may use Valerian, Asafetida, or Bromide of Potassium, and to allay restlessness - Chloral Hydrate, in gradually increasing doses, until the proper effect is produced. Formerly Opium was largely employed, but the mature opinion of the profession seems to be tending towards its total prohibition

While we cannot agree with this, yet we believe - Chloral Hydrate is preferable as a hypnotic in these cases, and should we use opiates we would select Morphia, by subcutaneous injections, as both safer and quicker than any other method of administration. In all cases the patient should be encouraged to use nourishing food and drink, and we must also procure rest and sleep, even if we find it necessary to advance towards heroic treatment by large and repeated doses. Should the form of disease be melancholy, rather than acute mania, the objections to opium

mentioned above, do not apply, and its peculiar quieting effect upon the wound is worth consideration. In Puerperal mania should we find tenderness of the womb or putrid discharges - indicating Metritis, we should at once resume the patient to use antiseptics vaginal injections, - While almost any of the antiseptics might be used in this case - we prefer Carbolic acid in Glycerine and water, or a weak solution of Permanganate of Potass. - although the practice was formerly regarded unsound, it is well in this case to put a dry blister on the abdomen. By this removing the

cause of septic infection we may hopefully strike at the foundation of the trouble of the Brain.

When the violence of the patient is very great - the use of Chloroform is allowable, - and while the patient is under the effects of its vapor - an injection of forty or fifty grains of Chloral Hydrate in saccharine solution, - but small in bulk, should be thrown into the Rectum.

When the case is Melancholia, the patient may often be persuaded to submit to the treatment herself. When attempts are made at starvation, when evasion and humoring have proved of no

avail, the patient should be forcibly chloroformed, and nutritious food be injected into the stomach through a rubber tube, introduced into the oesophagus. When the patient needs the treatment the use of antiseptics has proved curse, - for the spinal excitement from worms is easily transmitted to an already enfeebled brain. Should the suppression of spirits be marked nothing can produce a better effect than the judicious use of coca. - This presents the strengthening and stimulating effects of liquor, without encouraging inflammation. When anaemia exists - from

in some form, and bitter tonics, such as gentian, quassia or colombo, are imperatively demanded.
Treatment of Insanity of Lactation.
Evidently if the infant has not been weaned when it occurs - it must at once be taken from its mother; and besides using means to improve the blood, as are appropriate in anaemia, - the lacteal flow must be dried up, but not with too much suddenness. Turpentine and camphor externally applied will generally accomplish this. The patient must be allowed perfect quiet, in well ventilated, cool and somewhat darkened

brains, and in other respects
is to be treated in such a manner
as to build up her diseased
system.

In winding up our thesis
we can but regret that while
much is known about that
beautiful organ the brain -
there is not so much that is,
and seemingly will remain -
in the dark. The imprisonment
from the days when maniacs
were placed in cages, - there to
be hungered by idle sights
seers, as the accused of God, -
is great indeed, and those
noble men who instituted

the reform will always be blessed by posterity, but while thankful for this vast improvement much yet remains to be done. The Hygine of the disease is nearly perfect, but our medical and physiological knowledge is yet imperfect. May the profession move onwards, and if they may never reach the goal of perfection, let them continually endeavor in that direction

Ira H. Thomas [illegible]

Pathology and Morbid Anatomy.

of

Parenchymatous Hepatitis.

by

Joseph S. Homer.

Class '83. Missouri.

Pathology and Morbid Anatomy of Tubal, Parenchymatous, Desquamative, or Acute Nephritis.

Definition.

Is an acute, non-suppurative, inflammation of the Kidney. Is that sub-acute variety which constitutes the more acute form of "Bright's Disease," characterized by a more or less marked beginning, scanty and highly Albuminous urine, and dropsy. In its more advanced stages it is the large White Kidney of Chronic Bright's Disease.

Etiology.

The disease may be acute or chronic. Some of the more common causes of the acute are, first. Sex seems to have some influence, since it is more common in males than in females, and in regard to age. Youths are more frequently affected than the aged. Locality appears to exert an influence. Although the facts proving this are not numerous. Type of constitution is very important among the causes, since it is found the pale, light-haired, frail but flabby subjects

of the albuminous type have a special susceptibility to this form of nephritis. Also some active diuretics, as Turpentine, copaiba, cantharides &c. causing an active hyperaemia, which if continuing in action a sufficient time may induce an inflammation. Pregnancy is also a recognized cause, occurring once in one-hundred and fifty pregnancies. When it does so occur it is generally in primipara, and more common in twin pregnancies. having occurred once it may happen again, and not un-

-frequently into a permanent
malady, continuing indef-
-initely of gestation.
Why this form of the disease
should occur during pregnan-
-cy is not certainly known.
but is probably due to a special
predisposition of which preg-
-nancy is the exciting cause.
Probably among the more
common exciting causes
are, lying on a damp ground
sitting in a cold draught
during a profuse perspira-
-tion, Exposure to wet and
cold, causing a sudden
arrest of the skin secretion,

throwing increased action on the kidneys, causing dilitation of the renal arteries, so a hypercemia of the organ, which if continuing any length of time soon merges into an inflammation, Scarlatina and Diphtheria are prolific causes, among some of the more chronic causes may be mentioned: anything that tends to depress the vital forces, as Syphilis, Chronic Malarial poisoning, protracted suppuration, chronic Alcoholismus; chronic Mercurialismus, &c.

Pathology and Morbid Anatomy.

Probably the first change is a hyperaemia and enlargement of the organ, due to dilatation of its arteries, the cortex being much thickened, and of a white color, from over production of the renal Epithelium, lining the tubules, the pyramids and Glomeruli are much congested, the latter appearing as small red points on section of the organ.

These changes in the pyramids and Glomeruli contrasting strongly, with the

pale opaque color. In consistency the Kidney is much softer than normal. On tissue breaking with a soft friable fracture, the capsule separates readily, leaving a smooth surface. The interstitial tissue is unaffected unless the inflammation continue sometime, in which case the interlobular connective tissue will be found filled with small round cells, which are escaped leucocytes. These may increase and become developed into a more or less fibrillated -

- tissue, the kidney now
presenting a yellowish -
- white & mottled appearance,
the new inter-tubular growth
- th may gradually increase,
and finally contracting
from deficient nutritive sup-
- ply, will cause irregular
atrophy of the organ, as
occurs in the true chronic
interstitial form. The
changes in the tubal -
- Epithelium are import-
- ant, as furnishing the
chief diagnostic signs
of this form of the
disease. Among the pri-

many changes occur, first, the Epithelial cells lining the tubules become swollen and granular, due to albuminous changes, producing the condition known as "cloudy swelling". The granules being unaffected by application of acetic acid, thus differing from nucleoli. Many small cells are also seen in the tubes, which are partly a result of proliferation of the tubal-Epithelium, but the majority are probably

Escaped corpuscles from the neighboring vessels, in addition to these cell forms, the tubes contain Hyaline or Waxy cylinders, which appearing in the urine constitute the Hyaline or Waxy casts. They are formed by a coagulation of fibrine which has escaped from the blood. They are small transparent bodies, containing neither fat, epithelium, or granules, but only the outlines by which they can be re-

-cognized, "Epithelial Casts", are portions of the lining membrane of the tubules, detached in coherent pieces. if the tubule has under-gone fatty degeneration, these casts will be found studded with minute globules of oil, constitut-ing the "fatty casts". where the oil is in minute sub-division, the cast will present a fine granular ap-pearance, constituting the "fine granular casts".

may have their source in blood-corpuscles, constituting the "granular blood casts." The last are more commonly found in the most acute forms of the disease, and are due to a rupture of some of the congested capillaries, then again the granules in the cast may be larger, constituting the "coarse granular casts." These fatty changes are secondary to inflammation of the

tubules, and are not pri-
-mary, resulting the
swollen, granular, appear-
-ance of the epithelium
in the primary stages.
this fatty degeneration
proceeds, until finally
the cells are complete-
-ly destroyed. the fat
appearing as free mole-
-cules and granules
on the tube casts, corres-
-ponding to this fatty
change of the epithe-
-lium, is the appear-
-ance of the organ. the
redness diminishes

and the Malpighian Corpuscles are less prominent, the Cortex has a yellowish-white appearance, with minute yellowish streaks, owing to the presence of fat in the tubes of the Cortex. If this fatty change is not far advanced, it may pass off, the kidney returning to its normal condition, some of the degenerated cells being carried away in the urine, those that remain in the tube having the fat

in them partially ob-
-served.

Death.

It is hard to conceive of a word more generally known, more thoroughly understood, more frequently used, so simple in definition and so unwelcome in its effects as the word Death. To ask a small school boy what is Death would be but passive amusement to his innocent self estimated personal attainments. To ask the superficially polished Senior, after four long years of study toil in a finishing college, would be but insulting to the dignity of his literary

splendor; but to [illegible] to the silver haired sage, who has spent two score and ten years in the persistent pursuit of scientific proofs to verify known facts, becomes a question of no trivial importance.

To the populace the significance of the expression has been perfectly apparent since the days of fratricidal Cain, but to the skilled Physiologist 'tis still a theme of perpetual inquiry, to the practising Physician a subject of great practical importance. Not so much as to what death is in the abstract

as to the various pathological causes and conditions concomitant therewith. It is quite patent to the learned mind as well as to the unlearned, that life gradually develops from a dormant seemingly inanimate ovum, and the changes take place so gradually and so imperceptibly that the most skilled can not exactly fix the time when animal vitality begins. Scientists concede that as soon as fecundation takes place, then this vitality is produced; which is sufficiently definite for all practical

purposes but still clothed with the panoply of obscurity. However uncertain it may be as to when life actually can be said to begin, it is perfectly clear that it does begin and that it does end. And it is equally clear too what it must end but as uncertain when the end can be said actually to have arrived. According to the legal acceptation of the term there are two modes of death, civil or theoretical and physical or practical. The former belongs for consideration to the department of

the judiciary exclusively, while the latter alone professionally concerns the Physician. As to modes or manner in which physical inanimation takes place various men entertain numerous ideas. Once the prevalent idea was that in the animal nervous system was a special definitely defined centre or point found in the gray matter of the Medulla Oblongata, which is the seat of life, the destruction of which is attended with instantaneous death. This is the centre of respiration but

not by any means the entire controller of natural existence as is very clearly proved by Mr. Flint in his work "Physiology of the Nervous System" where he treats it so superficially as to say: With our present knowledge of the properties and functions of the different tissues & organs it is unnecessary to produce arguments to show the unphilosophical character of such a proposition. Short of the creative power of an imaginative genius we can scarcely conceive such a thing as

instantaneous death of the entire organism; still less can it be assumed that any restricted portion of the nervous system is the one essential vital point. We are taught that frogs will live for weeks and even sometimes for months after destruction of the Medulla Oblongata, and that in mammals by keeping up artificial respiration we can prolong many of the most important functions, as the action of the heart for hours after decapitation, which, I think, is sufficiently

conclusive to convince the liberal thinker beyond which there can be no shadow of doubt as to the fallacy of the once fostered theory. The idea of instantaneous death is probably nearest fulfilled when a powerful electric discharge passes through the entire cerebro spinal axis, but even here it is by no means certain that some parts do but for a time retain their so called vital properties. In apparent death the nerves and the heart may be shown to retain their characteristic properties;

themselves will contract under stimulation and will appropriate Oxygen giving off Carbonic Acid, or in other secreting tissues, the glands may be made to secrete; but who under these circumstances would venture to say the entire organism is dead? We really know of no such thing as death, except as the various tissues and organs which go to make the entire body become so altered as to lose their physiological properties beyond the possibility of restoration; and this never occurs for all parts of the

organism in an instant.
A person drowned may be to all appearances dead & would certainly die without measures for restoration; yet in such instances restoration may be accomplished the period of apparent death being simply a blank, as far as the recollection of the individual is concerned; yet it would have been equally as impossible to tell just the point beyond which restoration would have been impossible as to say just the moment when the organism became a living being.

Death is nothing more than a permanent destruction of the so called vital physiological properties; and this occurs necessarially at different periods for different tissues and organs. It was taught by Bichat that death may take place in one of three centres, viz., the head, the lungs or the heart. And again according to the fancy of Mr. Bristow death is produced (1st) by failure of nutrition; (2nd) by failure of the circulation; (3rd) by failure of the emunctories to effect the elimination of effete

and poisonous matters; and (4th) in failure of the nervous system to perform its proper functions. Now it is quite clear that death may begin in the atria mortis of Bichat but certainly not limited to these confines as was once accepted & believed. It is quite reasonable to the casual observer to accept the classifications of Bristowe, but when we look a little more into the ultimate developments in the progress of these prevailing causes we are constrained to modify the classification.

of water for a moment
pictures of exhibition, which may
depend on the lack of food,
disease of the alimentary canal,
the presence of diabetes or of
malignant tumors. The result
of birth in either case mani-
fests itself in the malnutri-
tion condition of the blood,
which if pushed far enough
must necessarily entirely
stop the circulation.
Death from elimination;
under this head must be includ-
ed all the effete matter, which
accumulates in the course of the
disintegrating & secretory processes

which are going on in
the animal frame. The first
of these is in importance is the
formation of Carbonic Acid
which naturally is eliminated
by the lungs; next with other
nitrogenous matters, which
are eliminated by the kidneys,
and some of the constituents
of the bile, which are formed
in the liver and under unfa-
vorable circumstances absorb-
ed into the circulation. Here
it is that the work of destruc-
tion takes hold of the vi-
tal principle strength the
poisonous condition of the

blood, sometimes ending in
condition asphyxia, the pathol
ogy, of which, is that during the
condition the non-aerialized
blood impeded in its transit
through the small pulmonic
arteries and capillaries and
through the corresponding
systemic vessels, which
continue to get nearest nearer
to complete obstruction,
admitting less & less blood into
the left side of the heart, send-
ing less and less through the
arteries; but all the while ac-
cumulating in the pulmon-
ic circulation —, right side

of the heart systemic vessels and capillaries; gradually increasing until the last spark of life ebbs away & the heart suspends its functions forever. And again these symptoms come on more slowly but essentially the same during the progress of some of the more chronic diseases.

Under the failure of the nervous system the whole or predominating cause can be traced to the unhealthy condition of the blood by Carbonic Acid poisoning. In fact it is not the blood

and spinal cord & the sympathetic system of nerves which has the direct control over the functions, the aggregate of which constitutes life. It is this which holds within its grasp the whole of the circulatory system, the excretory, and nutritive processes, and even the functions of the brain itself. It is this system therefore, that we should refer to when we think to speak of death beginning in the nervous centres. We have now lent a sufficient thought to each of the various

prevalent theories, and come finally to conclude notwithstanding the opinions of our ancestors to the contrary, that the great source and centre to which we may refer as the parlor of death is found in the circulatory system. This important system is composed of an automatic machine, the heart, with its efferent communicators, the arteries, and afferent appendages, the veins, with an intermediate apparatus under the well known title of the capillary system.

In order that this complicated machinery may perform its physiological functions two things are necessary; (1st) through all parts of the body there must be a constant flow of blood of a certain rapidity; (2nd) this flow must be susceptible to both general and local modifications. It is now a well established fact, that with the changes of circumstances in any tissue or organ a like change of the blood supply is demanded; these demands are responded on the one hand by the

mechanical and physical properties of the vascular mechanism and of the other by the nervous system. The special nerves which sway this influence are the Pneumogastric, a division of the eighth cranial nerve having its origin in a gray nucleus near the lower part of the floor of the fourth ventricle. It then passes out through the jugular foramen enclosed in a sheath common to itself & spinal accessory, and furnished by some ganglions, which no doubt have a special function.

it is composed of both motor and sensitive filaments, supplying each to the organs of voice and respiration; and motor influences to the pharynx, oesophagus, stomach & heart; acting as an inhibitor to the last named organ. The various actions & influences of which would furnish ample material for a scientific discussion.

And then the vasomotor which has their origin in the sympathetic, the office of which is to send influences to the arteries constricting or dilating in the

system — [illegible] [illegible]. The external influences induced & innervation on blood pressure was first made by Dr. Stephen Hale in the year seventeen hundred & thirty two. But the influence of the sympathetic system over circulation was left for verification by Claude Bernard in the year eighteen hundred & fifty two, just as the scientific sun of the nine-teenth century was beaming forth with almost incomprehensible splendor. This he did by dividing the cervical

sympathetic to find that it was followed by a rise of temperature and dilation of the blood vessels of the same side of the head. Brown Sequard in the same year found that stimulation to the peripheral portion brought a return of pallor and a reduction of temperature. This was the birthday and cradle of the alphabet to the great vasomotor function: a subject which still presents harvest fields fertile with instruction to those who may wield the scythe of

investigation. Finally we have noticed a few of the signs of mental death, the only unmistakable evidence of which, is beginning decomposition, first observed in the incrustation of the cornea However lightly we may have seemed to treat the subject we only had reference to that death which destroys the body; and would not venture to dilate upon the death that may follow, more than under all circumstances to remember

Leaves have their time to fall,
And flowers to wither at the
north-wind's breath,
And stars to set—but all,
thou hast all seasons for
thine own, O Death!

Jan. 2, 1883. G. T. Sikes.

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